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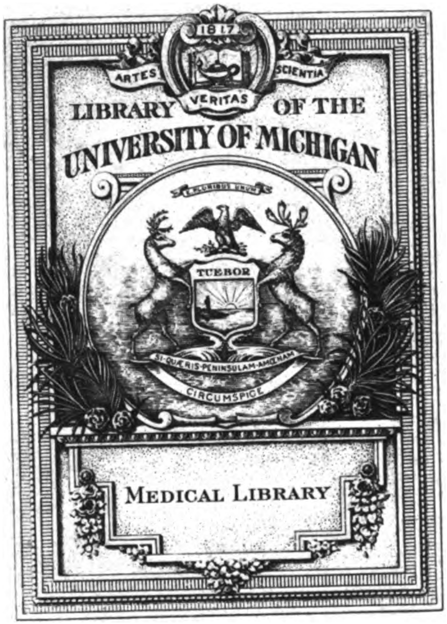

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ORIGINAL LECTURES.

PROFESSOR HUXLEY'S LECTURES
AT THE
ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

(Continued from page 635.)

II.—*The Development of the Human Skull.*

As might be expected from the nature of the case, it has not yet been possible to obtain a series of human embryos, in every stage of development, sufficiently large to enable embryologists to work out all the details of the formation of the human skull. But all higher vertebrate embryos so nearly follow one and the same type of early developmental modification, that we may, with perfect confidence, reason from the analogy of the lower vertebrates to man, and fill up the blanks of our observations of human embryos by investigations of the chick, the dog, the rabbit, or the pig.

In the chick, the first indication of the body of the embryo is an elongated, elevated area of the blastoderm, the axis of which is traversed by a linear groove. The one end of the elongated area is wider and more distinctly raised up from the rest of the blastoderm than the other: it is the cephalic end (*a* Fig. 2, Lect. V.), and the linear groove stops short of the rounded extremity of this part of the elevated area. A peculiar cellular cylinder, tapering off at each end, the notochord, is soon discerned occupying the bottom of this groove beneath the outer, serous, or neuro-epidermic layer of the germ.

A laminar outgrowth of the convex summits of the ridges which bound the primitive groove now takes place in that part of the embryo which will eventually become the middle region of the head, and the *dorsal laminæ*, thus produced, extending forwards and backwards, like parapets, upon each side of the primitive groove, lay the foundations of the lateral walls, not only of the skull, but of the spinal column.

Very early, however, the boundary line between skull and spinal column is laid down, by the appearance in the substance of the bases of the dorsal laminæ and the adjacent middle layer of the blastoderm, of the first pair of those quadrate masses of condensed tissue, the *proto-vertebræ* ("Urwirbel" of the German writers), which are the foundations, not only of the bodies of the vertebræ, but of the spinal muscles and ganglia. The proto-vertebræ increase in number from before backwards, and, at length, extend through the whole length of the spinal column, while none ever make their appearance in the region which will be converted into the skull.

The edges of the dorsal laminæ now unite, the coalescence taking place first in the middle cephalic region, and extending thence backwards and forwards; at the same time, the cephalic canal becomes separated into three distinct dilatations, or cerebral vesicles, of which the anterior is by far the most marked (Fig. 11, A, *I*, *II*, *III*).

The rudimentary cranial cavity next becomes bent upon itself in such a manner that the longitudinal axis of the first cerebral vesicle takes a direction at right angles to the axis of the third, and of the spinal canal generally. In consequence of this change, the middle cerebral vesicle occupies the summit of the angulation, and becomes the most anterior point of the whole body (Fig. 11, C, D).

The bend thus produced is the *cranial flexure*. It results in the division of the floor of the cranial cavity into two parts, an anterior and a posterior, which are at right angles to one another. (Fig. 11, C, D, E.) Hitherto, no trace of the notochord has been observed in the anterior division, that structure ending in a point behind the flexure (Fig. 11, D, E, *h*).

As development proceeds, the anterior cerebral vesicle becomes divided into two portions,—an anterior, the vesicle of the cerebral hemispheres (I^a); and a posterior, the vesicle of the third ventricle (I^b). In the upper wall of the vesicle of the third ventricle the rudimentary pineal gland (*e*) makes its appearance in the middle line. From the middle of the lower wall grows out a process, the *infundibulum*, terminating in a glandular appendage, the pituitary body, which last is lodged in the deep fossa situated in the floor of the anterior division of the skull, immediately in front of, and beneath, the termination of the notochord (Fig. 11, B, D, *d*).

Fig. 11.

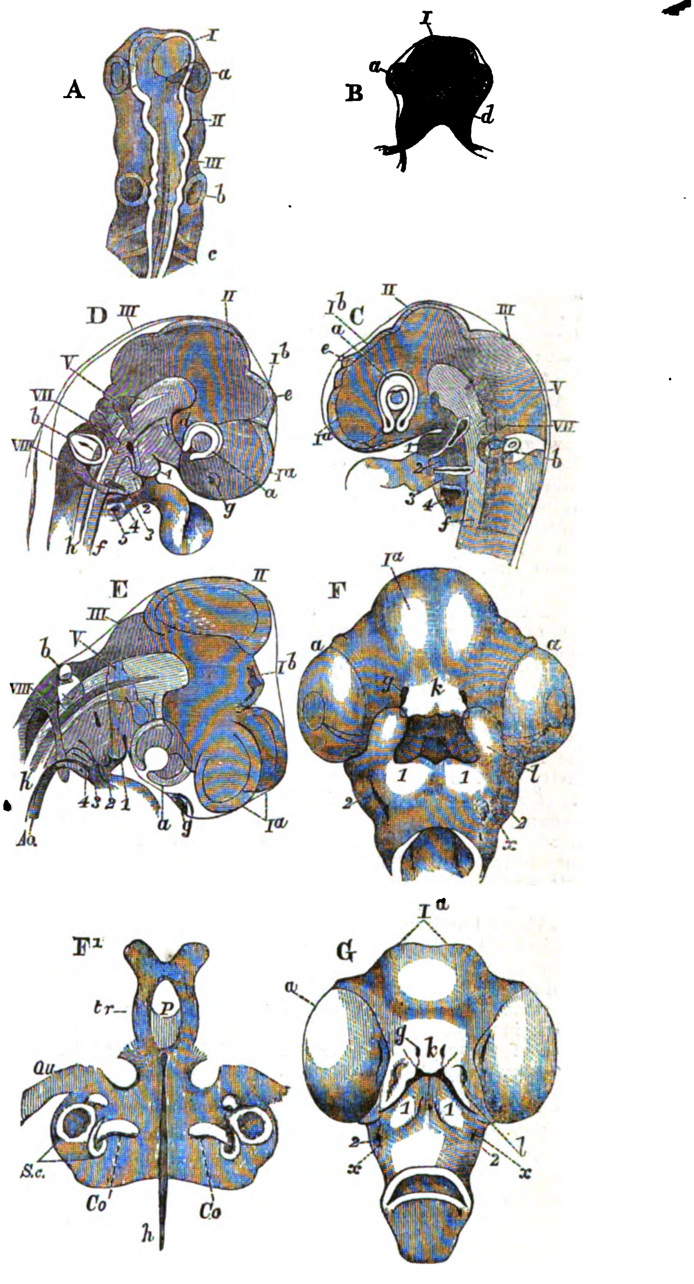

Fig. 11.—Successive stages of the development of the head of a chick. *I.*, *II.*, *III.*, first, second, and third cerebral vesicles; I^a, vesicle of the cerebral hemispheres; I^b, vesicle of the third ventricle; *a*, rudiments of the eyes and optic nerves; *b*, of the ears; *g*, of the olfactory organs; *d*, the infundibulum; *e*, the pineal gland; *c*, proto-vertebræ; *h*, notochord; 1, 2, 3, 4, 5, visceral arches; *V.*, *VII.*, *VIII.*, the trigeminal, portio dura, and eighth pair of cranial nerves; *k*, the fronto-nasal process; *l*, the maxillary process; *x*, the first visceral cleft.

A, B, upper and under views of the head of a chick at the end of the second day.

C, side view at the third day.

D, side view at seventy-five hours.

E, side view of the head of a chick at the fifth day, which has been subjected to slight pressure.

F, head of a chick at the sixth day, viewed from below.

F¹, the cartilaginous cranium of the same.

P, pituitary space; *tr*, trabeculæ; *Qu*, quadrate cartilage; *Sc*, semicircular canals; *Co*, cochlea.

G, head of a chick at the seventh day, from below.

The three pairs of sensory organs appertaining to the higher senses,—the nasal sacs, the eyes, and the ears,—arise as simple cæcal involutions of the external integument of the head of the embryo. That such is the case, so far as the olfactory sacs are concerned, is obvious; and it is not difficult to observe that the lens and the anterior chamber of the eye are produced in a perfectly similar manner. It is not so easy to see that the labyrinth of the ear arises in this way, as the sac resulting from the involution of the integument is small, and remains open but a very short time (Fig. 11, C, *b*). But I have so frequently verified Huschke's and Remak's statement that it does so arise, that I entertain no doubt whatever of the fact. (a) The outer ends of the olfactory sacs remain open, but those of the ocular and auditory sacs rapidly close up, and shut off their contents from all direct communication with the exterior. The olfactory nerve is developed from the anterior division of the anterior cerebral vesicle. The optic nerve is primarily developed from the posterior division of that vesicle. its connexion with the middle vesicle (which eventually gives rise to the *corpora quadrigemina*) being only secondary. The auditory nerve is developed in juxtaposition to the third cerebral vesicle, so that the three pairs of sense capsules do not correspond with the three primary cerebral vesicles.

While these changes have been going on in the proper cranial portion of the embryo, the rudiments of the face have made their appearance under a very singular guise. As the homologues of the dorsal laminæ in the head have grown upwards to inclose the cephalic cavity, so plates, which correspond with the visceral laminæ of the trunk, have grown downwards, to constitute the posterior walls of the buccal, pharyngeal, and cervical regions. These visceral plates, however, do not remain entire and undivided, as do those of the trunk, but grooves appear in them, directed transversely to the axis of the trunk, and, the grooves deepening, eventually become converted into slits—the *visceral clefts*—which open into the pharyngeal cavity, and bound corresponding *visceral arches*. The first slit is situated immediately below and in front of the auditory sac, and separates the first and second visceral arches,—the anterior boundary of the former being determined by the edges of a depression of the integument which will eventually become the buccal cavity (Fig. 11, C). A third, fourth, and fifth visceral arch are developed in successive order behind the first and second (Fig. 11, D); but as they are of no great moment in reference to the human skull, our attention may be confined to the latter.

It is particularly worthy of notice that, from the moment at which it is discernible as a distinct part, the root of the first visceral arch passes into the rudimentary cranium below and in front of the forepart of the auditory sac, while the root of the second is attached below and behind that sac. We shall find that the parts developed within these arches retain the same position in the adult state; so that any hypothesis which involves the supposition of an extensive change of place of these parts in the course of development is, *ipso facto*, unworthy of consideration.

Both the first and second visceral arches are connected with that part of the cranium which lies behind the flexure; but the inflected portion of the cranium in front of the bend exhibits, on each side, running from the root of the first visceral arch beneath the eye to the nasal sac, a ridge or elevation, which is called the *maxillary process*, and might be regarded as a visceral arch of the anterior division of the skull, from the base of which it is developed (Fig. 2, Lect. V., and *l*, Fig. 11, F).

Lastly, the middle part of the floor of the anterior cerebral vesicle, between the nasal sacs, thickens and gives rise to a broad, flat median process, with an expanded extremity, the terminal contour of which is excavated and slightly produced at the angles—the *fronto-nasal process* (Fig. 11, F, *k*).

At first, the cranium and all its arches are membranous, or composed of mere indifferent tissue, with the exception of the axial notochord; but, very early, chondrification commences. The indifferent tissue surrounding the notochord (the "investing mass" of Rathke) (*f*, Fig. 11, C, D), is converted into cartilage, and the same histological change takes place in the walls of the auditory capsules, and around the foramen magnum; the cartilage stops in the middle line, behind the pituitary body, but sends two processes, one on each side of that body, into the floor of the anterior division of the skull (Fig. 11, F¹, *tr*). These processes, the *trabeculæ cranii*, of Rathke, unite in front, and the cartilage formed by their union ends in the fronto-nasal process. The roof of the skull, and the greater part of its side walls, except in the region of the foramen magnum, are, at first, entirely membranous. Chondrification next take place in the visceral arches; a rod of that substance, which coalesces with its fellow in the middle line, being formed in the axes of the anterior arches on each side.

Purposing to return to the visceral arches by-and-by, I shall now trace out the modifications which are undergone by the chondro-membranous brain case. In the occipital region, and about the auditory capsules, which early attain a very large proportional size, the cartilage extends for some distance upon the infero-lateral parietes of the skull; on the floor of the posterior division of the skull it thickens notably, and forms a sort of model of the future basi-occipital and basi-sphenoidal regions, the interspace between the trabeculæ becoming rapidly obliterated and converted into the floor of the pituitary fossa. In front, the coalesced trabeculæ become changed into a plate of cartilage, compressed from side to side, which occupies the middle of the gradually-narrowing fronto-nasal process, as the ethmo-vomerine or internasal cartilage.

From the sides of the basi-sphenoid cartilaginous processes go off, which foreshadow the form and relations of the alisphenoids; at the sides of the presphenoidal region of the cartilage, similar processes represent the orbito-sphenoids. In front of these the upper part of the internasal, or ethmoidal, cartilage passes laterally into broad deflected cartilaginous plates, which curve round the olfactory sacs, and occupy the places of the lateral masses of the ethmoid and the inferior turbinal bones.

Thus far the terms of my description are almost as applicable to the embryonic cranium of Man as to that of the chick.

The human cranium has been observed forming part of an open groove; it undergoes a flexure, and developes visceral arches altogether similar to those of the chick, nor is there any reason to doubt that the organs of sense are developed in the same manner. The very earliest condition of the cartilaginous cranium of the human embryo has not been observed, but, at the beginning of the second month, it consists wholly of cartilage and of membrane, disposed in a manner which differs only in detail from that seen in the chick. Thus the occipital foramen is surrounded by cartilage, continuous with that which extends through the basisphenoidal, presphenoidal, and ethmoidal regions to the anterior end of the face. The alisphenoids and orbito-sphenoids are represented by cartilage, and cartilaginous plates arch down from the summit of the internasal cartilage, on each side, to form the substratum on which the nasal bones and, in which, the spongy bones will be developed. That part of the cranial cartilage which lodges the auditory organ is exceedingly large, and constitutes, not only an oval capsule for the membranous labyrinth, but sends back a continuation which fills the space corresponding to the *pars mastoidea*, and extends somewhat higher than it beneath the parietal region of the skull. All the upper part of the cranium is and remains simply membranous.

The relations of the regions of the chondro-cranium thus formed to the parts of the brain and to the exits of the nerves are the same as those which are observed in the bones which they prefigure.

When these bones begin to be developed, some of them make their appearance in the cartilage of the embryonic skull, some in the perichondrium, others in the membranous roof which is continuous with the perichondrium.

A single ossification appears around the notochord in the basi-occipital region and lays the foundation for the basi-occipital bone. The exoccipitals commence as single centres of ossification in the cartilage bounding the sides of the foramen magnum. The supra-occipital (*SO*) is developed from two ossifications in the cartilage above the foramen magnum, and from two others which appear not in cartilage, but in the membranous roof of the skull above the limits of the cartilage, and so give rise to that part of the squama occipitis marked *SO'*.

The basi-sphenoid is developed from two centres of ossification which appear in the floor of the *sella turcica*, but speedily coalesce into one. Two separate centres of ossification appear in the cartilage between these and the alisphenoids, and form the *lingulæ sphenoidales*. Each alisphenoid is developed from a single centre in its cartilaginous predecessor, but the parietals are the result, not of the ossification of cartilage, but of that of the membrane which roofs in the skull. Each has its own centre of ossification in this membrane.

(a) See also Kolliker's "Entwickelungs Geschichte," p. [illegible], *et seq.*

FIG. 12.

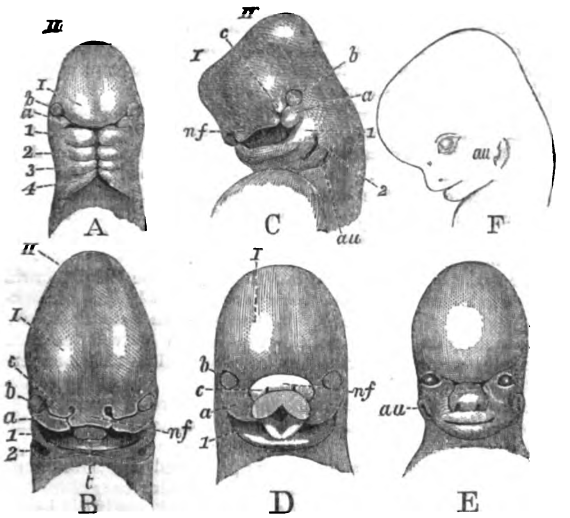

FIG. 12.—Successive embryonic conditions of the human head (after Ecker). *I.*, *II.*, the first and second cerebral vesicles. 1, 2, 3. 4, the visceral arches; *a*, the maxillary process; *b*, the eye; *nf*, the middle naso-frontal process; *c*, the lateral naso-frontal process; *t*, the tongue; *au*, the outer part of the first visceral cleft, which eventually gives rise to the external auditory meatus.
A, at three weeks.
B, at five weeks.
C, at six weeks.
D, at seven weeks.
E, at eight weeks.
F, outline side view of E.

The presphenoid arises by two separate centres of ossification, one on the inner side of each optic foramen. (Fig. 12, *P*, S.) These centres coalesce with the orbito-sphenoids of their own side before they unite with one another. (b) The osseous orbito sphenoids arise each by one centre in the corresponding cartilages. The frontals, on the other hand, are developed, like the parietals, each from one centre in the membranous roof of the skull.

Thus we arrive at the singular result that, while all the bones of the basicranial axis, and all the lateral bones of the

FIG. 13.

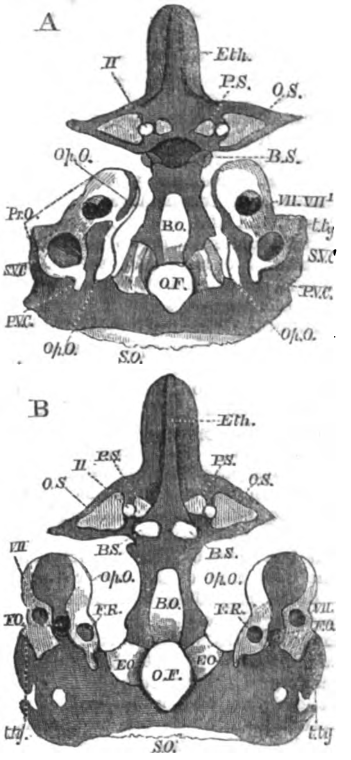

FIG. 13.—A, upper, and B, under view of the basis cranii and periotic cartilage of a human fœtus eight inches long. The alisphenoidal and immediately adjacent parts of the basi-sphenoid are omitted. The cartilage is darkly shaded, while the osseous deposits are left white, or but lightly shaded. The greater part of the supra-occipital is cut away. The clear spaces close to *t.ty* are apertures in the cartilage. The epiotic ossification has not yet appeared, and the pro-otic and opisthotic ossifications are quite distinct on the right side.

(b) The mode of ossification of the sphenoid bone is one of the most difficult questions in osteogenesis. Meckel has worked out the problem at great length in his *Archiv.*, Bd. i., and thus sums up his results in the *Handbuch der Menschlichen Anatomie*, Bd. ii., pp. 102—4:—

"In the third month, the first osseous nuclei appear in the two great wings, and soon afterwards the internal pterygoid processes begin to ossify as separate bones. Next, a third pair of ossifications appears in the external circumference of the alæ minores; and then, about the fourth month, a seventh and eighth nucleus, which lie side by side in the body of the sphenoid. In the fifth month is formed, alongside this fourth pair, a fifth, between it and the great wings. Upon this the two median nuclei of the body coalesce. Soon arises a sixth nucleus, on the inner side of the optic foramen, and then a seventh appears between this and the fourth, so that about the beginning of the seventh month the sphenoid consists of thirteen separate bony nuclei, since, notwithstanding seven pairs have arisen, the two primary nuclei of the body early coalesced into one.

"From this time forth the number of the nuclei diminishes still more considerably by coalescence. Those nuclei coalesce earliest which give rise to the portions of the sphenoid, which persist in a separate state longest. The fourth, fifth, and seventh pair soon unite into one piece; the first and second, coalescing on each side, constitute two other pieces; the third and sixth two others; so that in the eighth month the sphenoid consists of five pieces—the two greater wings, the lesser wings, and the body. Somewhat later the two lesser wings coalesce into one, and the sphenoid now consists of four pieces; thereupon the body and the anterior pieces unite, so that in the fully-formed fœtus the sphenoid consists of three pieces, the greater wings and internal pterygoid processes being still distinct; but in the first month after birth these three pieces unite into one."

The fifth pair of ossifications here mentioned are the *lingulæ;* the sixth, those which give rise to the presphenoid. Meckel's seventh pair of ossifications which arise between the fourth (basi-sphenoidal) and the sixth (presphenoidal), and are said, in the "*Archiv.*" to coalesce first with one another, and then with the basi-sphenoid, appear not to have been observed by other anatomists. I have not seen them, and they are not mentioned by Virchow, the latest writer on the subject. Virchow writes (*Entwickelung des Schädel-grundes*, 1857):—"The posterior sphenoid arises (if we leave out of consideration the internal pterygoid processes which are developed as separate and independent bones), according to most authors, from three nuclei, but, according to my observations, from six. Two of these belong to the alæ magnæ (alæ temporales), or lateral arches (Bogenstücken) of the parietal vertebra. They arise in the third month, and the external pterygoids are produced by direct outgrowths from them. In the third month, I also find two other centres of ossification which belong to the apices of the *lingulæ*, and are separated by distinct layers of cartilage from the others. The ossification of the *lingula* is almost complete in the fourth month, and its size is out of all relation to the dimensions of the other parts It is a thick, obtusely-cylindrical process, which coalesces primarily with the body, and has nothing to do with the alæ. The *lingula* is therefore similar to an anterior or inferior transverse process (Parapophysis, Owen), and the *sulcus caroticus*, notwithstanding its position in the inner side of the *lingula*, resembles an open foramen vertebrate. However, Arnold's opinion that the Vidian canal answers to the canal for the vertebral artery, notwithstanding it is placed on the inner side of the lingula, deserves the careful attention of comparative anatomists. The ossification of the body begins in the third month, exactly under the pituitary fossa, which is already preformed in cartilage. Kerckring was the first to point out that here the adjacent osseous centres at first arise, and that they unite and form a biscuit-shaped mass in the fifth month. Once he saw this 'semilunula' even in the middle of the third month. Kölliker and I myself have met with it in fœtuses of three months. Other observers, as Nesbitt and Mayer, speak of a single centre in the third month, and in the fourth of two centres, which must be regarded as the result of the erroneous combination of different individual cases. I find constantly, in the beginning of the third month, two nuclei, which arise near the upper surface in the anterior wall of the pituitary fossa, and are separated by a broad layer of cartilage. Very soon, however, only a single osseous mass is present in the interior of the body, which extends through the whole thickness of the cartilage, while anteriorly and posteriorly it is still enveloped in cartilage. In a fœtus 19 centimetres [7½ inches] long, I saw the simple osseous nucleus in the bottom of the sella, as a transverse plate which had not yet united with the lingula."

The anterior sphenoid is developed by the gradual coalescence of four osseous centres, of which again two belong to the body and one to each of the lesser wings. The latter are developed earlier than the former. They commence early in the third month, in the anterior clinoid processes, which are quite thick and osseous at a time when everything else in the anterior sphenoid is hyaline cartilage, and therefore are quite similar to the *lingulæ*. From this point ossification progresses rapidly, at last creeping round the circumference of the optic foramen to the body of the ala and to its anterior root. About the fifth month the lesser wing is completely solid in all parts. On the other hand, the nuclei in the body mostly appear somewhat later, usually in the fourth month, and at the inner edge of the optic foramen, so that they are at first separated by a tolerably broad median lamella of cartilage, which is continued into the ethmoid cartilage and *septum narium*. A union now very soon takes place between the centres of the body and those in the lesser wings, so that the optic foramen is surrounded by bone. . . . . Later, at times, as it appears, as early as the fifth month, the two lateral masses unite into a larger central piece, which is free superiorly, while below and anteriorly, in the middle line, it is surrounded by broad masses of cartilage."—(Virchow, l. c. pp. 15—18) three cranial arches, are primarily developed in cartilage, only one of the superior elements of these arches—the supra-occipital (*SO*)—is so; while the upper or "interparietal" portion of the *squama occipitis* (*SO'*) and the two other pairs of superior elements of the arches are developed altogether from membrane.

The ethmoid is developed from a single centre, arising in the internasal cartilage. Its so-called lateral masses, with the two upper spongy bones, are likewise developed each from a single centre within the superior part of the inflected lateral cartilages which wall in the olfactory sacs. The inferior turbinals are ossifications of the lower parts of these cartilages. But the nasal bones are developed within the perichondrium, which is continuous with the membrane in which the frontal bones are developed, and the vomer is produced within the perichondrium on the under surface of the internasal septum. The bones of Bertin are also said to be developed from membrane—the perichondrium of the presphenoidal cartilage, or the walls of the olfactory sacs.

The development of the temporal bone is particularly worthy of attentive consideration. The squamosal and the tympanic elements are developed in membrane, and, at first, lie perfectly loose in this membrane, upon the outer side of the periotic cartilage. The tympanic is a delicate ring, open above; the squamosal a mere rod, the *zygoma*, with an expanded posterior end, the *squama temporis*. The periotic mass, the styloid element, and the auditory ossicles are all preformed in cartilage.

The manner in which the cartilaginous capsule, which has the form of the subsequent periotic bones, and lodges the membranous labyrinth, becomes ossified has been much misunderstood; and as it is a point of vital importance in comparing the skull of man with that of the lower vertebrata, I shall enter into some detail regarding it as a matter of fact and as a matter of anatomical history.

Nearly two hundred years ago, Kerckringius, in his excellent "Osteogenia Fœtuum" (1670), laid the foundation for a proper understanding of this process:—

"Quarto mense mirum visu, quàm citò et quanta perfectione os squamosum magnam partem factum sit osseum. Os petrosum jam rubicundâ cartilagine signavit cavitatis suæ formam organorum auditûs capacem, nihil tamen adhuc præ se fert osseum, præterquam unam in longitudinem protensum crassiusculam et inæqualem lineam, annulo seu circulo, antea nominato, subjectam, et paulo longiùs protensam. Os itaque temporum hoc mense tribus constat ossiculis; annulo scilicet, osse squamoso, et illo jam commemorato.

"Quinto mense os squamosum ita adauctum est ut os syncipitis ferè, os autem cuneiforme omnino attigerit. Ossis petrosi pars illa quæ processum mammillarem constituit, terna de novo acquisivit ossicula: unum pyriformâ, acutiore, sui parte squamoso annectitur; alterum, scutum ovale referens, magnitudine priori vix cedens, mediâ cartilagine ab eo separatur; uti et tertium ab utroque, quamvis hoc magnitudine neutri sit æquiparandum, vix aciculæ majoris caput adæquans; sunt autem eo situ et ordine collocata, quem tabula fœtûs v. mensium, usurpata oculis facilius ad mentem quàm verba transmittet." . . . .

"Constat ergo os temporum hoc quinto mense sex distinctis ossiculis; osse videlicet squamoso, annulo, osse internam cavitatem efformante et tribus notabilibus quæ hoc mense exorta esse diximus."—(l. c. pp. 222, 223.)

The explanation of the third figure in the thirty-fifth plate, referred to in this passage, runs thus:—"Tria in osse petroso ossicula ostendit, e, e, e. Tria petrosi ossis distincta ossicula."

"Sexto mense pyriforme et ovale scutiforme coaluerunt in unum; tertium nonnihil auctum est magnitudine."—(l. c., p. 224.)

The third figure of the thirty-sixth plate exhibits the condition thus described, and the explanation is:—"Bina in osse petroso ossicula ostendit. *D*, ossis petrosi pars quæ jam ex duobus coaluit; *e*, tertium ossis petrosi ossiculum."

"Septimo mense jam tertium illud ossiculum duobus mense superiore inter se coalitis accessit. . . . .

"Nihil ergo de mense octavo nonoque addendum, nisi quòd ne tum quidem fœtus ullum habeat processum mamillarem, et quod adhuc insigni cartilagine distet os petrosum ab occipitis et syncipitis ossibus."—(l. c., p. 224.)

The temporal bone of a seven months' fœtus is represented in Plate xxxvii., Fig. 2, with the explanation:—"Quæ primo trià deinde bina fuerunt in petroso ossicula, jam in unum coaluisse, ostendit. C, ossis petrosi substantia, ex tribus jam sæpe dictis in unum coalita."

Cassebohm (*Tractatus quatuor de Aure Humana*, 1734, pp. 19 and 45. *Tractatus Quintus*, 1735, p. 15) discovered that the little linear ossification mentioned in the first extract from Kerckringius is developed in the immediate vicinity of the fenestra rotunda, eventually surrounds it, and extends upon the base of the pars petrosa. But the first definite light thrown upon the signification of Kerckringius' "Tria ossa" is in the following extract from Meckel's "Handbuch der Vergleichenden Anatomie" (1820. Bd. iv., p. 49), though Meckel does not take the trouble to refer to and explain the older observer's statements:—

"4. *Bony labyrinth.*—In investigating the formation of the bony labyrinth, the origin of the bony substance of the petrous bone is very carefully to be distinguished from that of the labyrinth itself. The former begins earlier than the latter, according to the ordinary type of ossification, by the development of a loose, soft, reticulated tissue in the previously existing homogeneous cartilage, and extends from before backwards.

"The first part to ossify, about the end of the third month, is the circumference of the *fenestra rotunda*, which is remarkable by reason of the analogy of the *fenestra rotunda* to the tympanic annulus. The ossification begins above, descends posteriorly, and, after a ring has been formed in this manner, extends forwards.

"At the same time arises a proper centre of ossification, completely separated from this, at the external end of the superior vertical canal.

"After this, a third little scale is produced, opposite about the middle of the internal vertical semicircular canal.

"At the same time ossification extends swiftly backwards and downwards from the first piece, so as to form the floor of the labyrinth.

"The second piece increases in size still more rapidly, so that, soon, the whole vertical semicircular canal, with the exception of its lower concave surface, is ossified. At the same time ossification is continued from its inner end over the inner surface of the petrous bone, surrounds the internal auditory meatus, penetrates into it, and so forms the floor of the cochlea.

"The horizontal semicircular canal begins to ossify, on its outer side, in the fifth month, by elongation of the bone forming the upper vertical semicircular canal; this is continued backwards from without and below round the horizontal semicircular canal. At least, I could discover no proper osseous centre for this canal, and it seems merely to become inclosed by the increase of the first and second."

All this is accurate, but, unfortunately, Meckel goes on to say, at page 51, that "the bony labyrinth is at first perfectly separate from the bony mass of the petrous bone which surrounds it, is developed earlier than it, and is provided with quite a smooth surface, though the two lie close together;" that "the bony labyrinth arises independently of the osseous substance of the petrous bone."

How Meckel arrived at this conclusion I do not know; it is certainly erroneous, and it has been the means of creating a great deal of unsound speculation as to the ossified labyrinth being a something distinct from the proper *pars petrosa*.

It is further singular that, in this passage, Meckel not only, as I have said above, makes no reference to Kerckringius, but that he does not attempt to refer the regions of the *pars petrosa* and *mastoidea* to their separate origins. This is the more remarkable as, in his well-known paper on the "Ossification of the Vertebral and Cranial Bones" (Meckel's *Archiv.*, 1815), p. 636, he states expressly that the mastoid process arises from a special centre. Possibly the omission arose from Meckel's supposing that the exterior of the periotic mass is developed distinctly from the proper bony labyrinth.

Hallmann in his well-known work, "Die Vergleichende Osteologie des Schläfenbeins" (1837), does not cite the account given by Meckel, and does not really improve upon the views of Kerckringius.

"In man, after, in the first place, the squamosal and then the *annulus tympanicus* are formed, the *os petrosum* and *mastoideum* is still a common cartilage, which fills, externally, the gap between the squamosal, the parietal, the supra-occipital and the ex-occipital. When, in the fourth month, the cochlea and a part of the semicircular canals, viz., the upper canal and the anterior crus of the external canal, already consist of porous bony substance, while the ossification of the posterior canal, and probably of that of the posterior crus of the external canal, has not proceeded so far; the *pars mastoidea* appears as a single or double nodule of the size of a millet seed, which is deposited upon the arch of the posterior canal, contributes to its ossification, and now soon spreads over the whole cartilage, the four neighbouring bones growing towards it. In Nos. 2543 and 9420 of the Berlin Museum, the insertion of this nodule upon the petrous bone is quite distinct. This osseous centre appears in the dry skeleton as an oval nodule, which I could easily scratch off without injuring the canals, which proves that it arises as a separate part."

FIG. 14.

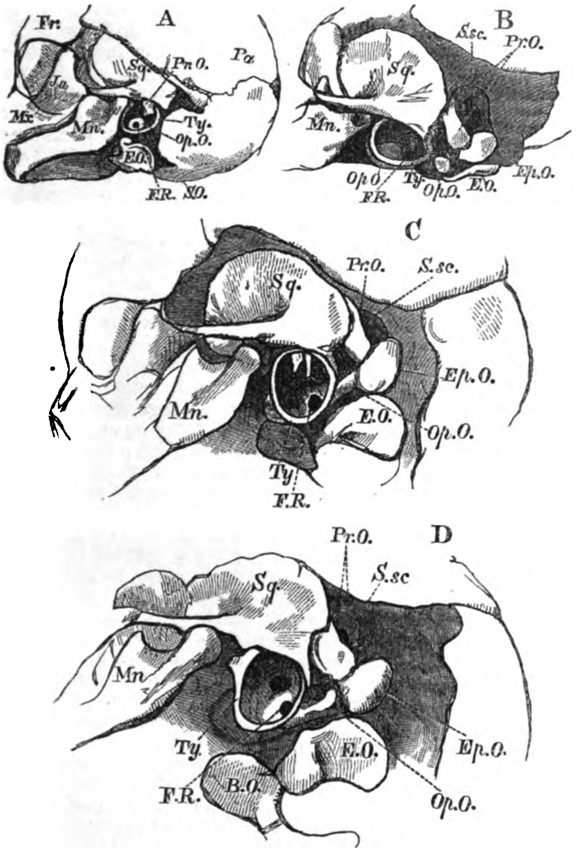

FIG. 14.—Development of the temporal bone.

A, from a fœtus 5¼ inches long, showing the commencing pro-otic and opisthotic ossification.

B, from a fœtus 8½ inches long. The ossification in the tegmen tympani is no longer visible from without, but its continuation backwards over the superior and part of the posterior vertical semicircular canal is visible behind the squamosal. The epiotic ossification has made its appearance, and the hinder extremity of the opisthotic ossification appears behind the tympani as the third ossicle of Kerckringius.

C, from a fœtus 10¼ inches long, the tria ossicula beginning to unite into the *pars mastoidea.*

D, from a fœtus 10½ inches long, the tria ossicula anchylosed.

Lastly, Kölliker, in his recently published "Entwickelungs-Geschichte" (1861), sums up the present state of our knowledge respecting the ossification of the periotic cartilage as follows (p. 320):—

"The ossification of the labyrinth does not appear to have been investigated since the time of Cassebohm (*Tract. de Aure Hum., Hal et Magdeb,* 1734 and 1735) and J. Fr. Meckel (*Handb. d'Anat.* iv., p. 42, *et seq.*), which seems to be the reason why certain incorrect statements are repeated year after year in almost all handbooks. It is not the case that the external part of the pyramid of the petrosal bone and the labyrinth ossify separately, nor is it true that ossification begins as a thin crust on the wall of the labyrinth; on the contrary, ossification commences in the whole thickness of the wall of the labyrinth; in such a manner, however, that it appears externally sooner than internally, and the whole pyramid becomes ossified from centres which make their appearance first upon the cartilaginous semicircular canals and the cochlea. The number of these is, as has been rightly stated, three—one on the first turn of the cochlea, and one on each of the upper and posterior semicircular canals, whence, by degrees, the whole *pars petrosa*, together with the cartilaginous *pars mastoidea*, which is united with it, ossifies in a manner, the details of which would not especially interest you. On the other hand, I do not agree in the statements that have been made as to the time at which this ossification arises. Neither in the third, nor in the fourth month, as is commonly stated, is there a trace of ossification; in fact, I have found the entire pyramid cartilaginous in an embryo five inches long, at the eighteenth week, or, in the middle of the fifth month. Only at the end of the fifth, and especially in the sixth month, do the osseous deposits commence, but these increase very rapidly. In the sixth month, however, one meets with nothing but a beautiful reticulated cartilage ossification, and, as yet, no indication of true bone, which only arises, in the later months, from the periosteum of the labyrinth and from the external periosteum, whilst, contemporaneously, the internal cartilage ossification is reabsorbed and is replaced by a vascular true bone, which, by degrees, becomes finely spongy. The *Modiolus* and *Lamina spiralis*, in the sixth month, are still quite membranous, and only ossify at the end of fœtal life, without ever having been cartilaginous."

There is no doubt that the statement of Meckel, confirmed by Kölliker, that the periotic cartilage ossifies from three centres is perfectly correct; there is no doubt, further, as Meckel, followed less clearly by Hallmann, has affirmed, that one of these centres gives rise to the future mastoid process; but it is equally indubitable that Kerckringius' original statement is true, and may be readily verified in the dry skulls of fœtuses of the age he mentions. The beautiful series of human fœtuses prepared by Mr. MacMurdo, in the Museum of the Royal College of Surgeons, enable one easily to reconcile the teachings of the older and the later observers, when taken in conjunction with the study of the same parts in wet preparations.

Fig. 14 A represents the periotic capsule of a human fœtus five and a-quarter inches long.

One ossification in the cartilage (*Op. O.*) is seen surrounding the *fenestra rotunda* (*F.R.*), and extending a little way upon the promontory. A second, very small, quadrate ossification (*Pr. O.*) is situated at the outer end of the superior vertical, semicircular canal, and apparently extends into the cartilaginous *tegmen tympani.* There is no other ossification in the cartilage than these two. As the upper part of the periotic mass in man answers to the front part, and as the lower part corresponds to the hind part of the same mass in the majority of the vertebrata, I term the ossification on the superior vertical semicircular canal the *pro-otic* bone, that on the cochlea the *opisthotic* bone.

In some dry fœtal skulls of this age the opisthotic ossification only is seen, just as it is described by Kerckringius, who seems not to have observed the pro-otic ossification in this stage.

The pro-otic ossification rapidly extends, as Meckel states, over the superior vertical semicircular canal (see Fig. 13, A), and reaching its posterior end, it includes the front and upper part of the posterior vertical canal; while, from the inner end of the anterior vertical canal, or the primitive centre, a mass of bone extends backwards in the periotic cartilage, and in the dry skull appears conspicuously immediately behind the edge of the squamosal. (*Pr. O.*, Fig. 14, B.) This part of it is, in fact, that one of the "tria ossicula" which Kerckringius says "pyriformâ, acutiore sui parte, squamoso annectitur."

The opisthotic ossification likewise extends backwards and, its hinder extremity becoming apparent in the dry skull behind the tympanic, is Kerckringius' ossicle, "vix aciculæ majoris caput adæquans." (Fig. 14, B, *Op. O.*)

Lastly, the third ossicle, "scutum ovale referens," is that developed upon the posterior part of the posterior vertical semicircular canal, which becomes the mastoid process. (Fig. 14, B, *Ep. O*)

Thus, in a fœtus between the fifth and sixth months, the "*pars mastoidea*" exhibits the appearance represented in Fig. 14, B.

Its upper part is cartilaginous, but its lower part is occupied by the three ossicula of Kerckringius, which have now come into contact, and begun to unite, though their primitive contours are perfectly distinct.

The "pars mastoidea" of human anatomy is therefore not a single bone, but one, the "scutum ovale," combined with parts of two others; and as the "scutum ovale" is certainly the homologue of the bone I have termed *Epiotic* in the oviparous vertebrata, (c) I propose to get rid of the confusing term

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(c) Croonian Lecture. *Proceedings of the Royal Society*, 1858 In the absence of a sufficient knowledge of the development of the human temporal bone, I followed Hallmann in identifying the opisthotic of oviparous vertebrates with the mastoid of mammals at the time this lecture was delivered.

"mastoid" altogether, and to call the specially "mastoid" part of the *pars mastoidea*, *Epiotic*.

Of the three periotic bones thus developed, the pro-otic gives rise to most of the *pars petrosa*, which is visible in the interior of the skull (Fig. 13, A), investing, as it does, the roof of the cochlea, the superior, and part of the posterior, vertical semicircular canal, the internal auditory meatus, and forming the *tegmen tympani*. To it, in addition, is due the upper half of the circumference of the *fenestra ovalis*, and a considerable portion of the *pars mastoidea*, as has been stated above.

The opisthotic bone constitutes all the *pars petrosa* visible on the base of the skull, furnishes the floor of the cochlea, surrounds the *fenestra rotunda*, and contributes half the contour of the *fenestra ovalis*; gives rise to the carotid canal by developing a lamella of bone, which gradually wraps itself round the carotid, and so converts the primitive groove for the vessel into a complete tube, at the same time furnishing its floor to the tympanum.

The lower edge of the squamosal is at first nearly straight, but it soon sends a curved process downwards behind the auditory meatus and between the tympanic ring and the periotic bones. In the fœtal skull represented in Fig. 14, D, it is obvious that this process corresponds with the *Margo tympanicus* of the adult temporal bone, and the manner in which the hinder end of the pro-otic ossification is fitted in between it and the representative of the ascending part of the posterior root of the zygoma is very well shown.

The tympanic bone is at first a delicate ring, interrupted above, and with tapering ends, which approach one another very closely. The anterior end is thicker than the posterior, however, exhibiting a sort of flange, or internal process, which corresponds in position with the middle root of the zygoma, and eventually unites with it. The lower arched part of the tympanic ring becomes anchylosed with the floor of the tympanum, while its posterior and upper end unites with the squamosal.

ORIGINAL COMMUNICATIONS.

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ON LATENT SYPHILIS, AND ITS EFFECTS ON HEALTHY FEMALES AND ON THE FŒTUS IN UTERO.

By LANGSTON PARKER, F.R.C.S.,
Honorary Surgeon to the Queen's Hospital, Birmingham, etc., etc.

I venture in the following paper to narrate some facts which I have personally observed in reference to the cause or mode of production of congenital and hereditary syphilis, and also to speak of the influence of latent syphilis in producing disease in healthy females, and in the fœtus in utero.

Infants who are born with the symptoms of syphilis, or who exhibit such symptoms at an earlier or later period after birth (without direct contagion), are the subjects of either congenital or hereditary disease. By congenital disease I mean that both mother and father were healthy at the time of conception, but that the mother, becoming diseased at some period of her pregnancy, contaminates the fœtus in utero, and gives birth to a diseased infant. By hereditary disease, I understand that the mother had symptoms of syphilis before she conceived, or, that she being healthy, the father was the subject of a constitutional syphilitic taint, either manifest or latent. There may seem little importance in this distinction; but a little reflection will show that there is a marked difference between the two states; its bearing on prognosis is also very important, since in the first variety, the congenital, the infant is frequently cured; whilst in the second it more commonly dies, or is the subject of symptoms which continue for longer or shorter periods, or through the whole of life, rendering the health feeble and precarious.

Syphilis must have a starting-point either in one parent or the other, or both; and although this is frequently found in the mother, still I believe it is much more common to find it in the father.

The mother may become the source of disease to her offspring in four different ways:—

1. She may be diseased before conception.
2. She may become diseased after she has conceived.
3. She may disease her infant in its passage through the vagina or external parts,—a source of infection formerly supposed to be very common, but in reality very rare.
4. She may disease her infant after birth. The father has, however, generally the most direct influence on the health of mother and child, and it is generally to him that, in the first instance, the origin of the contagion may be traced.

In the first place, the contagion may be direct. A man having an uncured chancre marries a healthy woman; he communicates the disease to his wife; the local disease is followed by a constitutional taint, and in this condition she conceives and gives birth either prematurely or at her full time to a diseased living child, or aborts, or is prematurely delivered at some period of her pregnancy of a dead one. Here the mode of infection is direct, clear, and unmistakable; so much so, that it is unnecessary to bring forward cases in support of it.

Secondly. A man, the subject of a well-marked constitutional syphilis, at some period before his marriage more or less remote, but who at the time of his marriage presents no symptom of syphilis whatever, either primary or constitutional, neither has done so for months or years previously, marries a healthy woman. His wife conceives, and, as in the last case, either prematurely or at her full time gives birth to a diseased infant, or aborts, or is prematurely delivered of a dead one. In this second form of infection the woman remains healthy, and does not exhibit either before or during her pregnancy, or after delivery, any symptom of syphilis. The only evidence of disease is in the infant. I say the only evidence, because doubtless, in such cases, syphilis exists in the father in a latent state: whether it exists at all in the mother is doubtful; but, practically, and to prevent a recurrence of this mischief in future pregnancies, both parents should be submitted to an anti-syphilitic treatment.

If the parents remain untreated, the same occurrence, *i.e.*, the birth of a diseased child, may take place after future pregnancies. I have known this extend to the sixth pregnancy, and neither father or mother exhibit any symptoms of syphilis during the whole time; when both parents were treated, a healthy child was born. I have placed this case on record, but such occurrences are not uncommon. I adduce a few cases in support of what I have just stated:—

Case 1.—A. B., aged 36, consulted me in 1860. He had chancre in 1848, followed by lepra and psoriasis affecting the body, hands, and feet. He married a healthy female in 1853, having for a long period exhibited no symptom of syphilis. His wife gave birth to her first child in the seventh month of her pregnancy. Her second child had pemphigus when it was three or four weeks old, and died. The third child had well-marked symptoms of syphilis—breaking out and puckering of the mouth. This child also died. The mother has never had any signs of syphilis, either in the organs of generation or elsewhere.

Case 2.—In August, 1852, I treated a patient for a well-marked attack of syphilitic lepra. The symptoms disappeared under a treatment which was not very protracted, nor was it very regularly followed. In 1854, this patient married a healthy young woman, who, in 1855, was prematurely delivered of a dead child. In 1856, she was delivered, at her full time, of an infant, which appeared well and hearty for three weeks. It then began to "snuffle," had puckering, and a dry eruption about the mouth, and two large vesicles of pemphigus on the thigh and on the side. The child was treated by mercurial inunction on flannel bandages round the knees, and cured. In this case the father had no symptom of syphilis for three years prior to his marriage, yet the disease appeared in his offspring. The mother never had any disease at all. I repeatedly and most carefully examined her.

Case 3.—A patient was under my care in the Queen's Hospital some years ago with a very formidable attack of pustular syphilis. Whilst he was in the Hospital, his wife brought her infant to me, covered with scaly blotches. The child was plump, and apparently healthy when born, but a few weeks afterwards the blotches broke out, and the health began to decline. The mother had no symptom of syphilis; her breasts were free from ulceration. I also carefully examined her with the speculum four or five times, but the uterus was entirely free from any evidence of syphilis. The child was treated by dusting the body over daily with dry calomel; it was cured by this plan. The mother was not treated. During the two years she was under my observation she had no symptom of disease.

In these three cases it will be observed, that although the mother gave birth to diseased children, they apparently escaped contagion; they had no symptom of syphilis. In the two first cases also, syphilis existed in the fathers in a latent state; they had no symptom when their wives conceived. All these cases were under my own care, but additional ones may be collected from the practice of others of a precisely similar character. M. Diday, in his excellent work on "Infantile Syphilis," has recorded six cases entirely confirming the observations I have just detailed.

These cases show a syphilitic father, either with symptoms latent or manifest—a syphilitic child—a healthy mother. M. Diday says—"Numerous and precise facts furnish a positive demonstration of this theory; the mothers were healthy, and there was no reason to suppose that they had been infected." These six cases will be found in detail at pp. 15 and 16 of M. Diday's work on "Infantile Syphilis," the Sydenham Society's translation. The explanation of these cases appears to be that the ovule is impregnated with diseased semen, and the product of the ovule is consequently diseased. It is very common to see symptoms of constitutional syphilis appear many years after the healing and supposed cure of the primary disease; and on the same principle must be explained the procreation of diseased offspring by men who have not exhibited any outward mark of syphilis for very long periods before marriage. In such cases the disease is "latent." M. Cazenave calls this the sleep of the virus.

The mother, however, does not always escape under the circumstances I have mentioned as affecting the father. To this part of the subject I shall return presently, but I wish here to show, before proceeding, that the father in whom syphilis is latent occasionally diseases his wife, without the occurrence of pregnancy, and without his having at the time, or having had for a long period, any symptom of syphilis.

Case 4.—I treated a patient, otherwise of very excellent constitution, for a chancre, and the constitutional accidents which succeed it, during the years 1860 and 1861. During the whole of 1862 there was no evidence of disease, nor has there been since. As he was engaged to be married, he visited me from time to time that I might satisfy myself and him that no symptom of disease existed. I repeatedly examined him, and most carefully, with this view. He married, after having been free from any symptom of syphilis for more than a year. About five months after marriage he brought his wife to me, who was suffering from severe nocturnal pains in the head, which ordinary treatment had not relieved. I was of opinion that the nocturnal pains were indications of a commencing syphilitic taint, although there was at that time no other symptom to support my opinion; but I had previously seen several cases where such a form of headache had been the precursor of other symptoms of syphilis. These headaches, although they had resisted ordinary treatment for more than a month, were relieved at once by blue-pill and opium, and the iodide of potassium; in three days they had disappeared, but shortly after the patient was covered with syphilitic roseola, and had two soft chancres in the vulva. She was not pregnant, and never had been. The husband continued to appear in the most robust health.

Case 5.—Again, in 1861 I treated a patient for an indurated chancre and the constitutional accidents which succeeded it. In the autumn of last year he married an exceedingly healthy-looking and interesting person, at that time having no symptom of syphilis, and not having had any since the attack for which I attended him in 1861. When he married no trace of syphilis existed, nor had there been any symptoms for about 18 months. Six weeks after marriage his wife's health began to decline; she became covered with an eruption, and had great irritation in the vagina and urethra. In this state he brought her to me. I recognised an aggravated syphilitic roseola; she had in addition several hard, knotty lumps in the labia, which are so characteristic, and also intense vaginal irritation, with discharge. She was not and never had been pregnant.

In these two cases we notice latent syphilis in the father, who diseases a healthy wife, without the occurrence of pregnancy. I quote one other case, personally observed, where the syphilis was manifest and not latent, but where the same effect was produced in a female not pregnant.

Case 6.—A.B., married some months after the symptoms of a formidable attack of secondary syphilis had disappeared, at the time of his marriage believing himself quite well; shortly after marriage his throat became affected, and ultimately assumed a most serious form of secondary phagedæna (in this state I was requested to see him in consultation). One day his wife called on me respecting the health of her husband, and I ventured to ask her if she felt quite well; she said, no; for soon after her marriage she began to suffer from a vaginal discharge, with great irritation; I pressed her to submit to an examination, which she did. The vagina was intensely red, covered with aphthous patches, and superficial ulceration, and the os uteri was red and swollen, and in the same condition as the vagina, and the labia had the same lumpy or knotted condition as in the last case.

In none of these three instances was there any pregnancy. In each of the cases the patients were only recently married, and in each case the husband was apparently free from disease at the time of his marriage.

Three cases very similar to those I have just mentioned—and entirely confirming the points they were intended to illustrate—that men, apparently free from syphilis, but who have at some period of their lives been the subjects of a constitutional taint, may produce disease in healthy females without pregnancy, are recorded by the late Professor Porter, of Dublin, in the 46th No. of the *Dublin Quarterly Journal*, for May, 1857. Whilst the fact of late years, at least, has generally been admitted that a female previously healthy may be contaminated by a man suffering from latent syphilis, it has been supposed by many that she does not thus suffer, except she becomes pregnant, and that she is contaminated more directly by means of the fœtus in utero—though indirectly of course through the father.

I am now as certain as I can be of anything in the domain of medicine, that a healthy female may be contaminated by a man apparently healthy, but who has been the subject of a syphilitic constitutional taint, and may receive from him a constitutional disease, without pregnancy or a primary sore having preceded it.

The cases I have quoted appear to me conclusive on this point, and they receive additional support from the evidence of M. Diday, Mr. Porter, and others. In the first class of cases to which I have directed attention, the mothers gave birth to diseased children, but themselves had never exhibited any symptom of disease. In the second class of cases, healthy women were diseased by men suffering from latent syphilis, but no pregnancy existed. There is, however, a third class, which I now wish to speak of, where the same conditions exist on the part of the man, but where the female not only brings forth diseased children, but is herself the subject of disease. The mother does not always escape under the circumstances I have mentioned in considering the first class of cases, and one or two modern writers have incorrectly asserted that she never does if she gives birth to a diseased child. M. Charrier, in the *Archives Générales* for September, 1862, relates the histories of six cases of this nature, and says that if a woman give birth to a diseased child, or if the infant show symptoms of disease during the first year after birth, without direct contagion, that she either is, or has been, the subject of a constitutional taint. However frequently this may be the case, and every one must know that it is commonly so, it cannot be looked upon as a law without numerous exceptions. There are many instances in which the mother never exhibits the least symptom of disease, although it becomes absolutely necessary to make careful and even repeated examinations of the uterus before giving a decided opinion upon this point. A man at a period more or less remote before marriage is the subject of constitutional syphilis; he marries a healthy female, having had no evidence of syphilis for some time before. Sooner or later his wife becomes pregnant, and her health begins to fail; she exhibits symptoms of syphilis; she aborts, or, is prematurely delivered of a dead or diseased fœtus, or, if she go her full time, the same effects are manifest—the infant is born either dead or diseased, or shows symptoms of disease sooner or later after its birth.

I detail a few cases which will illustrate this position:—O. P., well known to me, contracted a chancre in 1854. This was followed by a sore-throat, ulcers on the tongue, and a scaly eruption on the body, on the hands, and on the feet. In 1858, this patient married a plump, handsome, healthy wife, having had no symptom of syphilis for two years. She soon became pregnant, and her health began to decline. In the fourth month of her pregnancy she first suffered from bearing-down pains, and great vaginal and vesical irritation; she had hard lumps in the labia, and a scaly eruption on the abdomen and arms. Some of these symptoms disappeared under treatment, but not all. At the end of the seventh month she was delivered of a puny, emaciated infant, which died in a few days; but after delivery the bearing-down pains continued.

She became a second time pregnant, and was again prematurely delivered at the end of the seventh month of a diseased child, which died in a few days. During this pregnancy the bearing-down pains continued, and she had a sore throat. She became a third time pregnant, went her full time, and was delivered of an apparently healthy child. This child in three weeks had a scaly eruption and condylomata of the anus, but was cured by mercurial treatment.

She became a fourth time pregnant, and was delivered at the end of the seventh month of a diseased child, which lived only a few days. During the whole of this time the bearing-down uterine pains continued, and one symptom or another of constitutional syphilis was always present, even when she was not pregnant. This patient, although I well knew her, was not professionally under my care till after the birth of her fourth child. After having been made aware of the details of the case, and especial stress having been laid on the bearing-down pains, I suggested that a speculum examination of the uterus should be made, which had not been previously done, and I forbore suggesting any line of treatment till I knew the result, as I ventured the opinion that the patient had a chancre of the uterus, which produced the bearing-down pains, and which, it will be recollected, had existed from the time the first symptoms of syphilis manifested themselves. I did not make the examination, but a large ulcer was found occupying the lower lip of the uterus. This is a very remarkable case, showing not only that the semen of a man with latent syphilis can disease both wife and fœtus in utero, but that it may produce ulcers in the vagina and uterus which have all the character of chancres. This patient also suffered from muco-purulent discharge from the uterus; and it may be recollected that in my paper on "Syphilis of the Uterus" I particularly drew attention to this symptom, considering it, under such circumstances, a distinct and positive manifestation of secondary syphilis. I am not singular in this opinion, but I cannot now refer to corroborative testimony.

I bring forward one other case only. A gentleman contracted a chancre in June, 1858, which healed without leaving any induration behind it. In October, believing himself well, he married a healthy lady, and shortly after that he had a sore throat, which was reported syphilitic. Six weeks after marriage his wife had soft chancres on the labia. She became pregnant, and miscarried at the fourth month. She became again pregnant, and miscarried at the sixth month. She became a third time pregnant, and was prematurely confined at the eighth month of a child, which lived only fourteen days, and was covered with a well-marked syphilitic eruption.

In this case we observe secondary symptoms occurring in the throat shortly after marriage, proving clearly that the husband at the time of marriage was in that condition, which Gamberini has denominated the truce of syphilis; the disease was latent; the symptoms were suspended; the syphilis was not cured.

The cases I have related must, I think, carry conviction to the mind that syphilis may exist in a latent state in the system for an indefinite period without betraying itself by any outward or evident symptom, and yet it may manifest itself after marriage in the wife and in the offspring in the several ways I have passed hastily in review. Socially, this question is of the first importance; and two questions naturally suggest themselves for solution at this stage of the argument. Are there any symptoms by which latent syphilis can be recognised? and is a constitutional taint once contracted ever perfectly cured?

With regard to the first point, the disease would be no longer latent if it were manifested by any symptom. I believe there are no means of knowing whether syphilis exists in a latent state or not. I have known patients robust, healthy, florid, and strong procreate diseased children, and that has been the case in many of the instances I have brought forward in this paper. I am sure none of the persons alluded to, some of them personally known to me, would have entered the marriage state had they supposed for a moment that they were labouring under the least suspicion of a syphilitic state. There is, however, another and a brighter side to this question. Many persons who enter the marriage state, having previously been the victims of constitutional syphilis, do not procreate diseased children; many children born of parents thus situated are healthy when born, and have never exhibited in after years any symptom of contamination. I have personally observed many of these cases, some of which I have placed on record. In fact, I have known a man marry with a bad constitutional taint upon him have healthy children, and neither they or his wife suffer. The explanation of this is difficult, and I believe it impossible to say whether a man who has been the subject of constitutional syphilis will have healthy or diseased children. There are many circumstances which would enable the Surgeon to give a probable, but not, I think, a certain or positive opinion. "The facts which clinical experience teaches are: that any man who has once been affected with constitutional syphilis, although he may have been for some time free from outward or visible symptoms of the disease, may beget a diseased child; but, on the other hand, both wife and child may escape, from some hidden causes not yet explained, or very imperfectly so. There are several theories on this point,—but what difficult point of Medicine is not beset with theories?—and none of those I have seen recorded afford us any satisfactory data upon which to form an opinion.

One remark before I conclude. Is there a test of the cure of syphilis? I think if a man having had constitutional disease marry a healthy female, and neither she nor her offspring ever exhibit any mark of syphilis, we may safely hazard the opinion that the father is cured, and this is the best and perhaps the only one that can be given. Unhappily, however, for this test, syphilitic fathers, with evident syphilitic symptoms, sometimes beget healthy children, and do not disease their wives; these, I am willing to admit, are exceptional and rare cases, but there are several on record. I think, on the whole, this is the best and safest test I know of, and upon it, in giving an opinion, I generally rely.

There are many points of the highest importance which I have left unmentioned in this paper. One more point only I mention, and that bears upon treatment. All I have to say in reference to this is, that if a man marry a healthy woman, and disease her and his offspring, it is a proof that syphilis exists in him in the latent state, although not manifested in him by any outward or visible sign; and it is the duty of his Surgeon to submit him again to treatment, whatever treatment he may have gone through before; and not only should this be done, but the parties should be sexually separated for a time, and the wife also submitted to treatment, whether she have any symptoms of syphilis or not, if she have brought forth a diseased child. If the child be alive, of course that also should be submitted to treatment. The nature of the treatment of such case and of such individual, of course, must be determined by a variety of circumstances, of which the most important are the health and constitution of the parents, the nature of the syphilitic symptoms, and the form of treatment which had been previously adopted.

CASE OF

ANEURISM OF RIGHT COMMON CAROTID IN A BOY OF FIFTEEN—OPERATION—DEATH.

By **ROBERT KNAGGS**, Colonial Hospital.

On March 9, 1863, I was called to see Charles Vincenot, aged 15, with a painful tumour in the neck.

He was a pale, delicate boy, apparently much beneath the age stated; had been weakly since an attack of scarlatina in his infancy; and has Pott's (angular) curvature of the two last dorsal and two upper lumbar vertebræ, attributed by his friends to a fall which he had at the age of ten.

About a fortnight ago, a small swelling, thought to be glandular, appeared in the track of the right carotid, on a level with the superior border of the thyroid cartilage, accompanied with severe facial pain. (Shortly previous to his death he remembered to have hurt his neck in throwing a stone.)

When I first saw the tumour, it was about the size of a small hen's egg, fluctuating, pulsating distinctly, but not forcibly, very tender on pressure, and exciting much distress from neuralgia of the side of the neck and face.

The state of the boy's general health from the effects of existing chronic lienitis and muco-enteritis, was so unfavourable to the success of any operation that I hesitated to act, but the size of the tumour increased with such alarming rapidity, that on March 16 it was considered imperatively necessary to make an effort to save the patient, by tying the small portion of the carotid remaining between the lower border of the tumour and the subclavian. Dr. Dasint kindly undertook the administration of chloroform, and with the assistance of Dr. Mercer (of the Colonial Hospital) and himself, I operated; the only step that needs mention being the total division of the sterno-clavicular origin of the sterno-mastoid muscle.

After the operation the pain was at first mitigated, the health apparently benefited, and the enlargement of the spleen almost disappeared; but the intense mucous irritation impaired, and ultimately took away his appetite, and debilitated him. The ligature came away on the 34th day, and in two more days the wound had perfectly cicatrised, but from this moment the patient gradually declined, and died on April 28, the forty-fourth day after the operation.

The tumour had become rather more flaccid, but not manifestly diminished in size; and at the death an erythematous patch about an inch in diameter showed itself behind the external jugular vein, on the outer and upper part of the skin covering the aneurism, betokening the commencement of suppuration in the contents of the sac.

Autopsy, Sixteen Hours after Death.—The skin, superficial fascia, platysma, with the external jugular being carefully dissected back, the reunion of the sterno-mastoid was found complete; then the sterno-mastoid, sterno-hyoid, thyroid, and omo-hyoid muscles were dissected upwards, and found intimately, and in some parts inextricably connected with the front wall of the aneurism, while the back wall did not seem to have escaped beyond the sheath of the vessels. (The tumour was about three inches long by two broad, oval, bounded internally by the larynx and appendages, and posteriorly by the scaleni and recti muscles.) I then opened and emptied the sac, which contained, in walls of organising fibrin, a dark coagulum, easily broken down and expelled. Cleaning the cavity, and stuffing it with raw cotton, I proceeded to remove it as entirely as possible with all the vessels implicated, and then traced the artery in the posterior wall of the tumour, and carefully opening it from within. The preparation (which is turned inside-out, and stuffed with horse-hair) shows—1st. The complete healing of the artery below the ligature. 2ndly. The rupture of all the coats of the vessel: an organised coagulum keeping open the communication between that part of the artery within the bounds of the sac, and its interior. 3rdly. The collapse, atrophy, and plugging up of the external carotid after leaving the verge of the tumour. 4thly. The obliteration of the internal carotid. 5thly. The healthy condition (apparently) of the coats of the artery. 6thly. The atrophy of the pneumogastric nerve from impaction in the clot.

Trinidad, May 1.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

Case 1.—*Thoracic Aneurism, with Unmistakable Symptoms During Life, and fully verified at the Examination after Death, illustrating several of the known Effects of Thoracic Aneurism.*

(Under the care of Dr. FRASER.)

C. B., aged 28, a gardener, admitted into the London Hospital January 19, 1849, states that for two years he has felt an uneasy sensation in the chest, accompanied by occasional fits of short breath and spitting of blood.

He complains of palpitation, and a constant gnawing pain in the stomach, which induces him to attribute all his ailments to that organ. He is oppressed with a constant dread of sudden death, and an undefined sensation of impending evil. A pulsating tumour is seen and felt at the upper margin of the sternum, and, upon auscultation, a whizzing sound is heard in the same region. There is no pulse at the left wrist. The diagnosis and future result admitting of no doubt, he was ordered to keep at perfect rest, under a treatment merely palliative. He died suddenly on March 24.

Examination Thirty Hours after Death.—Body wasted; face and lips very pale. The left pleura contained one pint of partially coagulated blood and serum, by which the lung was compressed towards the mediastinum; substance of lung healthy; substance of heart healthy. A slight thickening of aortic valves, and a few atheromatous deposits at origin of aorta, which vessel, close at the point of emergence from the pericardium, was dilated at its convex side, forming a true aneurism; the sac was empty, but, when filled, capable of containing a pint and a half of fluid, and, if fully distended, would rise to within an inch of the thyroid gland. The orifice of the arteria innominata was flattened to half its normal size. The left common carotid artery was obliterated in its whole course, forming a hard, round cord. The left subclavian artery was clogged by lymph for half an inch at its origin. The left pneumogastric nerve was stretched on the anterior surface of the tumour, as also the inferior recurrent, which in some parts was indurated and wasted. The anterior sides of the bodies of the second and third vertebræ were carious. Upon examining the tumour, the internal coat of the artery was observed to be extensively ulcerated, and the sac had given way at the concave side of the tube into the cavity of the left pleura.

Clinical Remarks.—This case is interesting in this respect, that all the symptoms during life were fully explained, and the diagnosis verified, by the post-mortem appearances. Some of the pathological appearances corroborate the observations of Hope and others, that aneurisms of the aorta burst almost always into the left pleura; "that those of the arch are almost invariably true aneurism." Dr. Hope mentions two cases "in which both the left carotid and subclavian were plugged up at their origin." Might the undefined dread of death be attributed to a morbid action of the tensed pneumogastric nerve operating upon the stomach, heart, etc.?

Case 2.—*Thoracic Aneurism, showing the Great Obscurity of Early and Late Symptoms in Certain Cases, the Danger of Mechanical Interference, with a Rare Cause of Death from Pressure of the Sac on the Pulmonary Veins, and Consequent Exosmotic Effusion of Blood.*

(Under the care of Dr. FRASER.)

W. G., aged 40, a mariner, admitted into the London Hospital August 14, 1849, for the second time, having been an in-patient for a few days in the month of July. During the first period there were no marked symptoms, and he was treated for dyspepsia. When now admitted he complained of pain and a sense of constriction at the upper part of the sternum, was troubled with cough, dyspnœa, and dysphagia. Upon percussion there was dulness over the upper part of the sternum. Upon auscultating, the second sound of the heart was prolonged, but no bruit. A slight pulsation could be observed at the sterno-costal articulations of the third and fourth left ribs. The dyspnœa and dysphagia gradually increased in severity, and a peculiar croaking sound was produced in the act of breathing. No morbid sounds heard in the lungs. Having been more than usually restless for some nights, and particularly on the night of October 9, during which the croaking sound was very loud, on the following morning he suddenly threw up about five quarts of blood, and expired. The treatment had been perfect rest and occasional counter-irritation and anodynes, and at an early stage the Surgeon was requested to, and did introduce a probang into the stomach to assist in determining the diagnosis.

Examination.—Body not wasted; face and lips very pale. The right lung firmly adherent to the ribs. The left lung free. On passing the hand behind the lung to the spine, an irregular and fixed tumour could be felt attached to the vertebral column. On cutting into the trachea, a quantity of frothy blood escaped. The pericardium contained one fluid ounce of serum. The left carotid artery was contracted at its origin. Heart and valves healthy, and all its cavities empty. Upon opening the aorta just at the commencement of the arch, and at the concave side, an opening, one inch in circumference, with a well-defined edge, led to an irregular, round tumour, the size of a walnut; this pressed upon the left bronchus and left pulmonary veins. This tumour was filled with laminated fibrin, soft, and of a red colour in the centre. It was not ruptured. The inner coat of the aorta, just as it emerges from the pericardium, was rough, but no hard deposit. Just at the commencement of the descending aorta, another tumour, of a size and appearance similar to the other, occurred. This tumour was quite empty, and lined with a dense layer of fibrin, except at the upper margin, where it was very thin, and almost diaphanous. Its posterior wall was formed by the body of the second dorsal vertebra, which was in a state of caries. This was the tumour felt on passing the hand behind the lung. It was not ruptured. A sort of pouch was formed by the coats of the artery at the lower end of the dilatation or tumour, leaving the upper edge of the descending aorta inverted, or, as it were, invaginated upwards into the arch. No rupture into the pleuræ, trachea, œsophagus, posterior or anterior mediastinum was found. The left lung did not collapse. On cutting into the substance of both lungs, they were observed of a dark cherry colour, gorged with blood, but crepitant throughout, and no breaking down, or destruction of substance; and by washing the normal vesicular structure and colour of the lungs was restored.

Clinical Remarks.—The early history and symptoms in this case were very obscure, and even in the latter stages they were by no means positive. At the examination, the point which struck my attention first, and from which a practical lesson may be drawn, is, that the very simple operation of introducing the probang in obscure cases of dyspnœa, dysphagia, vomiting, etc., is not to be incautiously practised. The very thin and fragile coat of the upper surface of the second sac described might have been very easily ruptured by the probang introduced merely as an explorator. In this case there was no danger of this most untoward event; but if an adhesion had existed between the sac and the œsophagus, with a consequent weakening of the walls of both, the result might have been instant death under the hands of the startled operator. The predisposing cause to death in this case may be put down to the aneurismal diathesis, for that there is such a diathesis this case goes to prove, there having been two sacs; but there is a case somewhere recorded in which a man had sixty-three aneurisms. The remote cause of death may be put down to the pressure of the sac upon the pulmonary veins in their passage from the left lung to the left auricle of the heart, as they pass obliquely through or under the arch of the aorta, anterior to the left bronchial tube, and consequently between the two powerful resisting walls—viz., the œsophagus and bronchus—compared to the easily-compressed vein-walls. In this respect the case is, so far as I know, unique. The effect was equivalent to placing a ligature upon the veins. I am unaware whether any physiological experiments are recorded upon this point, and therefore unable to state whether a similar effect would arise from a ligature so applied. The proximate cause of death may be put down to,—First, the sudden and complete congestion of the lungs. This is not an uncommon effect of disease of the heart, as in cases of mechanical stasis, or the pulmonary hypostasis of Piorry. Secondly, the double proximate cause of death was clearly the sudden loss of blood, and its effects in passing the glottis. Now, as there was no breaking down of the structure of the lungs, no rupture of the air-cells into the bronchial tubes, and no rupture elsewhere, whence came the ejected blood? We may fairly suppose that the blood had lost its normal crasis, or, so to speak, its vital cohesion, from the effects of lowering treatment and hygienic measures, and consequently its specific gravity lowered, thereby easily transuded through the very thin membrane of the overgorged capillaries, and the equally thin walls of, and into, the air-cells,—these latter, when the lungs are fully distended, exposing an area of fifteen hundred square feet. I have heard of, and indeed I knew of, a case of a fatal transudation into the peritoneal cavity, supposed to have been caused by obstruction to the portal circulation; also the transudations which occur in purpura hæmorrhagica, although there is no pressure, are somewhat analogous as to the state of the blood. There is a difficulty in explaining why the pressure operated fatally at one moment more than any other, unless we suppose that, from mental emotion or physical exertion, the aneurismal sac might be inordinately distended, and thus cause serious and instant pressure; and we may also suppose that, for some days before death, there was a gradual and progressive congestion of the lungs.

Case 3.—A Case of Thoracic Aneurism, showing that a Thoracic Aneurism may Burst into a Pleural Cavity without being Immediately Fatal, and that ultimately Fibrin may be Deposited so as to Form a Sac.

The conditions mentioned in the title of this case might deceive, so far as mere auscultation signs go, as a case of pleural effusion or consolidation might be diagnosed in mistake.

In the next case, under the care of Dr. Chambers, this mistake might easily have been made.

Although the notes of the case (seen in Dr. Fraser's private practice) are imperfect, they are deserving of notice:—

A. B., a naval officer, had hæmoptysis for some months; there was no emaciation, or pinched features, and so far as Dr. Fraser learned he had no dyspnœa, no dysphagia, or any uneasiness. On percussion universal dulness was present over left lung, and by auscultation a slight crepitation was audible. Death was not very sudden.

At the post-mortem examination there was observed a rupture, the size of a shilling, with a smooth and defined margin in the descending thoracic aorta, opening into the left pleural cavity. The areolar structure of the left lung had nearly disappeared, and the cavity was occupied by large fibrinous deposits; in fact, it constituted one enormous aneurismal sac. Several authors, Allan Burns for example, write of aneurisms bursting into the left pleural cavity, and Dr. Sibson shows that in six cases, four burst into the left, and two into the right pleural cavity, whereas in seven cases where the substratum of the lung was entered, five penetrated into the right, and two into the left lung.

In the 17th letter and 14th article of Morgani a case of rupture into the left thorax is given. A case nearly similar to the one I have related is noted by Scarpa, see Whishart's *Transactions*, pp. 94; but the most remarkable recorded case is by Magnetis in his "Bibliotheca Chirurgica," vol. i., p. 99; in which the aneurism was so large "ut saccus integram thoracis in latere dextro cavitatem repleret, pulmonesque in tantum comprimeret, ut hi ea propter multum essent consumpti," but in no one of these cases is a distinct fibrinous deposit mentioned, as in the foregoing.

ST. MARY'S HOSPITAL.

RUPTURE OF AN ANEURISM INTO THE LEFT PLEURAL CAVITY—DEATH THREE DAYS AFTER THE SUPPOSED TIME OF RUPTURE.

(Under the care of Dr. CHAMBERS.)

[Reported by Dr. RHODES.]

THOMAS W., aged 39, decorator, was admitted into St. Mary's Hospital on February 11, with supposed effusion into left pleura.

He stated that a week ago, whilst working on a ladder, he suddenly became faint, and fell down insensible, in which state he remained for about two minutes. On recovery, he felt considerable pain in the left side, for which he consulted a neighbouring Practitioner, who, supposing the man to have received some injury to the ribs, advised his removal to the Hospital.

On examination, the whole of the left side of chest was found dull on percussion, with absence of breath sounds and vocal vibration. There was no pulsation in the cardiac region, but the apex beat could be felt in epigastrium, and the heart sounds heard to right of xiphoid. Breath sounds normal on right side; the countenance anxious, but no great dyspnœa.

He was treated with purgatives and diuretics internally; blisters to the side.

February 13.—Dyspnœa less; no pain in side; has had a good night.

14th.—Percussion dulness much less; heart sounds heard in cardiac region and bronchial breathing in left infraclavicular region. About twelve o'clock p.m. I was called to see him by the nurse, who said he was dying. I found him very pale and exhausted; he complained of great pain in the sides; perspiration stood on his forehead, and he fell back dead.

Autopsy.—On removing the sternum, the left pleura was filled with very dark-coloured serum. The heart was displaced, being pushed over to right of xiphoid. A large clot of blood, measuring in quantity about four pints, was effused over the surface of left lung. On removing this, a sacculated aneurism, about the size of a small orange, was found at the posterior part of the thoracic aorta, just at its termination, which communicated with the pleura by an opening about the size of a quill. No traces of pleurisy were found. The right pleura perfectly healthy.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

VARIOUS CASES (EPILEPSY, SPASM, PARALYSIS) TREATED BY THE ADMINISTRATION AND INHALATION OF OXYGEN, AMMONIA, AND BROMOFORM.

(Under the care of Dr. RAMSKILL.)

Dr. Ramskill has lately been renewing his investigations on the administration and inhalation of oxygen in the treatment of various chronic forms of paralysis, of spasm, and epilepsy, also of the action of ammoniacal vapour and of bromoform in the same diseases, the last having especial relation to shortening actual attacks of epilepsy, as well as to preventing them.

The following is a brief history of the first case:—Nearly two years ago the son of a chemist, 23 years of age, applied to the Hospital for the relief of what was diagnosed as syphilitic epilepsy. He had contracted syphilis two years before; had treated himself by the free use of mercury, chiefly blue pill and opium; secondary and tertiary symptoms succeeded; these were apparently cured by iodide of potassium, but he was left weak, wasted, and cachectic. Eight months prior to his application, after exposure to cold and wet, he was attacked with headache, worst on the right side, and with some vertigo; these symptoms did not yield to treatment, and the iodide did not alter them. The dose never exceeded five grains. After a fortnight's suffering he had a succession of five epileptic fits, having an interval of a few minutes between each. The head symptoms then became much relieved, but he had a renewed attack of a batch of fits every fourteen or sixteen days, varying in severity, and occasionally leaving a temporary paralysis of the left lower extremity.

He was tall, very thin, of gaunt, dark aspect; his face was covered with acne of a livid, and suspiciously tinted colour, and he had several large boils about the back of the neck, which had been caused by blisters, frequently applied, with a view of preventing his fits. As he was a tolerable manipulator, according to his own account, in practical chemistry, it was suggested by Dr. Ramskill that he should make oxygen gas, and inhale it twice or three times daily, stopping the inhalation only on the accession of giddiness or other uncomfortable symptoms, and that he should continue the iodide of potassium in the same dose as he had hitherto taken, viz., five grains twice daily in sarsaparilla.

The result was that the cachectic aspect began to disappear, the boils vanished, and at the end of three months he reported having had only one series of fits, and those of very light character. He had recovered a healthy aspect. Lately he was accidentally met with looking in perfect health, and he stated that beyond the one series of fits, he had not suffered from an attack for sixteen months.

The treatment at present pursued by Dr. Ramskill consists, for children, in the inhalation of atmospheric air drawn through a glass inhaling apparatus one-third full of solution of peroxide of hydrogen. The solution must be highly charged with oxygen, or the gas is not given out with sufficient freedom. The inhaling apparatus is also gently agitated by an attendant during the process, and a hot moist cloth kept wrapped round it. The inhalation is continued until some sensible effect is produced on the pulse or on the feelings of the patient. The slightest feeling of giddiness is considered a sign of sufficient action. Some children appear quite insensible to such a quantity of oxygen as the solution throws off; in these cases bladders containing the pure gas are substituted. In either case the peroxide of hydrogen is given internally. The results which have been obtained we shall notice on another occasion.

HEMIPLEGIA IN AN OLD MAN—RECOVERY—SPASM OF THE FACE.

(Under the care of Dr. HUGHLINGS JACKSON.)

Spasm of the Muscles supplied by the Portio Dura of the Right Side for more than Thirty Years—Good General Health until the Age of Seventy-one—Then Hemiplegia on the Left Side—Recovery—Subsequent Amaurosis of One Eye.

Isaac H., aged 71, was admitted an out-patient under my care at the Islington Dispensary, June 5, 1860. [He was afterwards under my care at the Hospital for Epilepsy and Paralysis.] On trying to get out of bed that morning, he found that he could not move the left arm and leg. The paralysis could not have been very severe at first, as he was able to be supported into my room the same afternoon. Probably some few softened fibres had given way, or, if there had been a clot, it must have been a small one. He looked a very healthy man, and I ascertained that his hearing and sight were good; he had no arcus senilis, and his hair was not white. There was no cardiac disease, and the specimen of urine examined was free from albumen, and did not deposit lithates. His appetite was not impaired, and, indeed, except that he could not use two of his limbs (the left arm and left leg), he felt as well as usual. So far the case was not an uncommon one, but there were peculiarities about the face which were rather puzzling. The whole of the face (orbicularis palpebrarum, etc) on the right side (the side opposite to that of the paralysis of the limbs), was twitching, the face being of course drawn, by spasm, to that side. The case looked superficially like one of disease of the pons Varolii, the face being affected on one side, and the arm and leg on the other. [In a case of disease of the pons Varolii recorded in this Journal, p. 210, there was slight spasm of the face, and in another mentioned, p. 211, considerable, but it was of quite a different kind to that in the case I am now describing.] I soon found, however, that he had had the spasm of the face more than thirty years, that it was not always present, and that he was subject to it on any excitement. I found, too, that the left side of the face was paralysed to a slight extent, but the orbicularis was not affected. It was clear, therefore, that the hemiplegia was of the ordinary kind, depending, doubtless, as there was no loss of sensation in the limbs, on some lesion above the pons, probably in the corpus striatum. The artery supplying this part of the brain, the middle cerebral, is, Mr. Canton says, the most frequently diseased of any in the body, and hence the frequency of hemiplegia depending on disease or softening in it. This patient had no arcus senilis, but he had rigidity of the external arteries of the head, the temporal, and no doubt the internal arteries were similarly affected.

The spasm and the hemiplegia were distinct affections, one being due to degenerative changes in one of the nervous centres, the other probably to some long-standing disease in a nerve-trunk, viz., the facial division of the seventh.

He had afterwards disease of [the vessels of] another nervous centre, the retina, the spasm remaining just as it was.

The spasm of the face began nearly thirty years before, when he was a man-of-war's man in the West Indies. He was at that time "moon blind," as were also all his boat's crew at the same time; but he only, so far as he knew, had any spasm of the face after it. This began about four or five months after the blindness, and probably had nothing whatever to do with it. He had, he says, no special exposure to cold, and it began gradually, without any other symptoms; sometimes twitching, and then being quite still. He has ever since had it more or less. When he is at ease his face is still; but if excited it twiches violently, closing up the eye, and dragging the face to the right. The speech had never been affected by it; but, as he mentioned, it was slightly impaired since the hemiplegia. This was due probably to some slight paralysis of the tongue rather than to the little paralysis of the face on the left side. I have, however, no note as to the condition of the tongue. The speech was very little impaired when I saw him; but in many cases of hemiplegia this defect rapidly passes off. It is frequently one of the first to go; but now and then it remains when the paralysis of the limbs has gone. The amount of paralysis of the face is certainly no index of the amount of loss of the power of speech. In cases of hemiplegia in which there is scarcely any facial deviation, it may be much impaired, whilst in paralysis of the portio dura, unless it be quite complete, it is not much altered. In hemiplegia it depends chiefly, I suppose, on the coincident paralysis of the tongue, which is mainly supplied by another nerve—the ninth.

Of course I did not attempt to treat the spasm of the face. I told him to stay at home; ordered him to live well, and prescribed an aperient and a simple vegetable tonic. He quickly recovered the use of the arm and leg, and was at work again on August 14, thinking that he was well. He had been able to walk some time.

I saw him again on February 12, 1862. He was still well, so far as the hemiplegia was concerned, but he had now some defect of sight in one eye, on the side which had been paralysed. One evening in October, as he was going home, he suddenly lost the sight of the left eye. It seemed pretty clear that the loss of sight was for a time quite total, and, as it was quite recovered in seven hours, it is difficult to explain it. He had afterwards another attack, and from this he had not recovered when I saw him. I examined the eye by the ophthalmoscope, and found a small clot of blood effused near a small vessel above the optic nerve entrance. The rest of the fundus appeared normal.

June, 1863.—He attended again, at my request. He is now blind of the left eye, and has still the spasm of the face, but in other respects his health is fair. He is still at work.

This case is interesting as showing rapid, and in a certain sense permanent, recovery after hemiplegia, at so great an age as seventy years. Not long ago I had under my care, at the Metropolitan Free Hospital, a patient, 81 years of age, who had had an attack of hemiplegia. He found out one morning on waking that he could not use the left arm and leg. When I saw him, eight weeks afterwards, he could walk, though badly; but he steadily improved, and except pain in the arm, and some little want of power in raising it, he got well in a few weeks more. He attended about two months afterwards for cough. In both these cases the excellent constitution of the patients had more to do with recovery than the Physician's treatment. I think that it is of worse omen for a patient of middle or advanced age to present slight symptoms, with a little paralysis of the face, or a little occasional thickness of speech, or temporary forgetfulness of words, than to have a definite attack like hemiplegia. The former are, I think, more certain evidences of a general degeneration of the nervous system; but when hemiplegia occurs suddenly in a person in apparent good health, it is, I believe, more likely to be dependent on limited disease, and, as it were, more of an accident.

MIDDLESEX HOSPITAL.

ANEURISM OF THE ASCENDING PORTION OF THE AORTA—SUDDEN DEATH FROM RUPTURE INTO THE PERICARDIUM.

For the notes of this case we are indebted to Mr. Devereux, the Resident Medical Officer. It is interesting as being one of sudden death, the cause of which was only cleared up by post-mortem examination, as, from the history obtained from his wife, it will be seen that he had no symptoms that induced him to seek Medical advice.

A. M., aged 42, cabman, had been a man of intemperate habits, but enjoyed good health, with the exception of a slight cough, which was never sufficient to prevent him following his occupation. On February 1 last, he was walking along the street, when a man who was behind him saw him fall down, and on his coming forward to assist him, he found him dead.

Post-mortem Fifty Hours after Death.—Whole body well nourished, with good muscular development; brain and membranes normal; thorax large, slightly emphysematous. The pericardium was distended, and, on making an incision into it, five ounces of yellow serum flowed out, leaving a large clot of coagulated blood, which surrounded the heart, and presented a beautiful cast of that organ. This blood had flowed from a rent three-quarters of an inch in length, in an aneurismal pouch, which sprung from the aorta immediately above the semilunar valves. This pouch was the size of a bantam's egg. The rupture had taken place within the pericardium. On placing the clot in water in a measure-glass, it displaced a quantity of the water equal to ten ounces; therefore the pericardium had contained fifteen ounces, including the serum which had been removed.

Royal Patronage of Homœopathy. — It is well known that for some years past the homœopathists have had a Royal patron in the Queen of Spain. Latterly, Her Majesty has entirely broken with the allopathists, and trusted herself entirely to homœopathy. As a consequence, most writers of homœopathic books now send a copy to Madrid, and, in return, mostly receive a Spanish decoration of some kind or other. Thus, the Order of Charles III. has just been bestowed upon two French pupils of Hahnemann, viz., MM. Jahr and Peroussell. In like manner the Court Newsman of the *Morning Post* states that at a recent banquet given by H.R.H. the Duchess of Cambridge, a notorious London homœopathist figured as a guest.

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Medical Times and Gazette.

SATURDAY, JULY 4.

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FEES.

Tradition records that a counsel, arguing warmly for the compulsory recovery of Medical fees, met with a reply from the presiding judge at once characteristic and unanswerable. He bluntly called the Physicians "a parcel of fools for wishing to turn a ready money business into a credit one." Undoubtedly, immediate payment of a gratuity purely honorary cancels all obligations, and prevents long bills as well as bad debts. But still the system has its worse side, and it occasionally subjects Professional men to considerable injustice.

The correspondence recently published between Dr. Vose, of Liverpool, and the executors of the late George Grant, affords evidence of this difficulty in a form the most practical:—

"In July last, Dr. Vose was summoned by telegraph from Liverpool to Aberdeen, to visit the late Mr. George Grant, who had become indisposed while in the Highlands. Dr. Vose obeyed the summons, saw Mr. Grant at Aberdeen, took charge of him back to Liverpool, and then attended him for some time subsequently. Shortly after Mr. Grant's decease, Mr. Robertson Gladstone, one of his executors, requested Dr. Vose to send in a note of what was due to him for Professional services; this was done, and the following correspondence ensued."

The correspondence in question opens with a letter claiming the sum of 205 guineas—19 for ordinary visits, and 186 for the journey of 372 miles. In reply it is stated that the charge is considered heavy; that Dr. Latham had "made a charge" of only 100 guineas for going to Liverpool, a sum which he reduced to 50 guineas on the patient dying soon after his arrival. An inclosure from Sir Thomas Gladstone, one of the executors, mentions the scale of fees in Edinburgh as £25 for one day, and £30 for a day and night. For the latter sum it appears Professor Miller attended at Fasque, in Aberdeenshire, distant 135½ miles from the Scotch metropolis. Without unnecessary detail, it may be said that an offer of £100, afterwards increased to £120, was refused by Dr. Vose, and that "under these circumstances the executors were reluctantly compelled to close their accounts without introducing Dr. Vose's claim into them."

Dr. Vose has thus been left without any remuneration whatever, and there can be no hesitation in saying he has been very unfairly treated. It appears from his statement that he has been in the habit of requiring and receiving without question this rate of payment; and he, like every professional man, has clearly a right to value his time at his own appraisement.

After the documents quoted, follow two letters from Dr. Peter Mere Latham and Dr. Watson. The former, while fully supporting the claim of Dr. Vose, simply denies that as a matter of fact or even of fair inference there is a word of truth in the statements respecting him. He declares that in the case spoken of he made no "charge" whatever; that he was absent little more than a single night from his practice, and that a hundred guineas were voluntarily sent as his fee. The President of the College of Physicians, in an excellent letter, considers the question on its broadest bearings. He assumes the fee as customary, and shows that the usual scale of two guineas for three miles "scarcely compensates the great and inevitable inconvenience, and the possible, even probable, injury to the Physician which such visits involve." "I feel sure," he adds, "that the Physicians in London whose services are most in request will not consent to undertake long journeys into the country, if such journeys imply any risk of subsequent uncertainty or haggling about the usual honorarium."

The tariff of fees established by the Edinburgh Practitioners, though it appears unnecessarily low, is irrelevant in a question where individual standing and local competition oblige every case to rest on its own footing. Nor is the argument more pertinent, by which, in a letter of one executor, the sum demanded is calculated as representing a practice of £36,000 per annum. No man's bodily strength could bear the constant labour of such travelling as is there implied, even if the demand for a peripatetic and ubiquitous Doctor were likely to be regular and unintermittent.

While, however, we wish to express sympathy with Dr. Vose in the present instance, it is not to be denied that the conflict of opinion here exhibited is one of many likely to occur again, and which may be susceptible for the future of a more equitable solution. For it is obvious that railways have materially altered the relations between leading Practitioners in the great metropolitan centres and the country at large. Although the most prominent men in London maintain, without difficulty, an approach to the scale of fees sanctioned by use in old coaching and posting days, still the reduction in delays of the road has enabled many persons of late to obtain by special agreement first-class Medical advice at rates of remuneration far below this standard. Many Physicians, also, and Surgeons of the highest rank, admit freely that it is often worth their while to set aside the system of mileage, and compound for an equitable fee, assessed rather by time than by distance. Perhaps it would be better if this were more generally known to the public, and if collision were anticipated on our part by the invariable preliminary of a definite agreement. Such was the practice of an eminent Physician recently deceased, who telegraphed a statement of his expected fee in reply to every distant summons. In the absence of such special contract, the concluding sentence of Dr. Watson's letter states concisely and truly the rule of action. "After all," he says, "the matter, to my mind, is a very simple one. The patient, or the friend who acts on his behalf, is bound to do one of two things, either to ascertain beforehand the terms on which the desired visit will be made, and accept or decline the visit accordingly, or else, having neglected to obtain this information, he is bound in honour to discharge in full the pecuniary return which is customary for such a visit."

Most assuredly if a country bumpkin walked into Stultz's and ordered a coat without inquiring the cost, and were to demur at the charge of five guineas for the coat when made, because he had heretofore got a complete suit from E. Moses and Son for two pounds ten, any jury would make him pay. Dr. Vose's fees are those which are customary with men in his position. They are customary with him, and they are pretty well known. The patient therefore who sent for him without taking the trouble to inquire the cost has no right to complain if the fees are high. He should have found that out first of all.

Sir Thomas Gladstone seems quite unable to comprehend that any Physician can claim a greater sum than that which he paid Professor Miller. In 1855, he says, he had telegraphed for the Professor from Edinburgh to Fasque. The distance is 135½ miles. The Professor "was absent one night and the greater part of two days, and received £30." Edinburgh, thinks Sir Thomas, "stands at least as high as Liverpool as regards the Medical Profession; and therefore, as Dr. Vose was absent two days and two nights, £60 would be a liberal remuneration for the special visit."

We wonder that Sir Thomas did not appeal to Glasgow, where a respectable Physician, if we are not misinformed, will accept of half-a-crown; however, fortunately for the Profession, Liverpool does "stand higher" than Edinburgh, so far as that city is represented by Professor Miller. Men evidently set a higher value on their services there, and turn their time into money at a higher rate.

The question, however, of high payment for exceptional journeys is easily put on a common-sense footing.

We know one of the most eminent London Physicians who bitterly laments the day when he was summoned into a distant county, whence he returned in forty-eight hours with a fee of £500. He lost by his absence a patient from whom he had been in the habit of receiving £120 per annum. Professor Miller's £30 must have been subject to some heavy deductions. There was the loss of two days' fees at home, the interruption of all ordinary business, his patients alienated because they could not find him, the worry and anxiety of a hasty journey,—all these things, and more, would have to be accounted for ere the Professor could put by a residuum of the beggarly fee as a provision for his own dark days, or for the family whom he may have to provide for.

It is very clear that Sir Thomas Gladstone and his colleagues never contemplate the idea that a fortune ought to be made in physic: that a man who gets the highest education, and devotes the best part of his life to the Profession, should ever be able to realise an independence. But let us, ere we conclude, just ask our Medical readers these two common sense questions.

It is clear that Sir T. Gladstone, Mr. Robertson Gladstone, and Mr. Kelso, who have bilked Dr. Vose in this case, represent the class, *par excellence*, out of which the better class of juries are chosen. What chance would Dr. Vose have if the College of Physicians threw down the barrier which separates them from tradesmen, and if he went to law and appealed to such a jury? before whom, doubtless, any number of ragged M.D.'s could be paraded, who would swear that they would gladly take even less for a day and a night's work than the Scottish Professor asked.

Secondly, we have some well-meaning persons who say that "Government" or "Parliament" ought to do something for the Profession, and pass laws to regulate such and such things. But these flinty-faced hyperborean merchants are just the class from whom the commercial M.P. is chosen. Add to these a sprinkling of homœopaths and spiritualists, throw in the bishop and archdeacon, and Sir Lytton Bulwer, who gave testimony in favour of Zadkiel, in the Court of Queen's Bench, in the case Morrison *v.* Belcher; add the sons and brothers of the women of fashion who saw visions in the "crystal sphere," and tell us what is to be expected from the legislation of such persons. No, we want no legislation. We want *esprit de corps* and self-respect. We are liberal to the poor. We are sure that the necessities of mankind will drive them to us; and we only claim such recompense from the rich as shall enable us to keep our position in society.

PRINCE LEOPOLD.—The health of this young prince continues to excite some uneasiness. It will be remembered that about two years ago he repaired to Madeira for a change of climate.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—Mr. Sands Cox's term of office as Surgeon to the Queen's Hospital having expired, a vacancy occurs in the Surgical staff. Mr. Furneaux Jordan, Assistant-Surgeon to the Hospital, and Professor of Anatomy at the Queen's College, is the unopposed candidate.

THE WEEK.

THE ELECTION OF COUNCILLORS AT THE ROYAL COLLEGE OF SURGEONS.

Just before going to press we received the results of this election, which took place on the afternoon of Thursday, the 2nd inst. It has terminated in the return of Messrs. Lane, Busk, and Hancock. The following is the number of votes obtained by each candidate:—Mr. Lane, 199; Mr. Busk, 169; Mr. Hancock, 153; Mr. Hawkins, 125; Mr. Curling, 91; Mr. Tatum, 88.

PARLIAMENTARY.

On Thursday, June 25, the Naval Medical Supplemental Fund Society Winding-up Act Amendment Bill was read a second time.

In the House of Commons, Sir George Grey, in answer to a question put by Mr. Dawson, in reference to the case of Mary Ann Walkley, again stated that he did not think it would be possible to establish a system of registration and inspection applicable to workrooms in private houses. He would, however, willingly acquiesce in the introduction of a bill by Mr. Dawson on the subject. Mr. Bagwell asked whether, if the deceased were an apprentice, as had been stated in the *Times*, that fact would not enable the Government to prosecute her employers. Sir George Grey said it would depend on the facts of the case, with which he was not sufficiently acquainted to say whether there existed sufficient evidence to go before a jury.

A long debate took place on the propriety of holding the court-martial on Colonel Crawley in England. Objections were raised on the score of expense, but Government evidently intend to persevere in the course they have announced.

On Friday, Lord Shaftesbury brought the question of the removal of Bethlehem Hospital before the House of Lords. He founded his argument in favour of its removal on the unfitness of its present site for the cure and treatment of lunatic patients. He said that of late years great progress had been made in the treatment of insanity. Cheerful situation, open space, and plenty of means of air and exercise are now considered necessaries. Agricultural pursuits for a large class of patients, and for others pleasant walks and the means of gardening, are of primary importance. The present site of Bethlehem is not more than seventeen acres, and it is situated amid a dense and rapidly-increasing population. The windows of adjoining buildings overlook the gardens, and exercise in the open air free from observation is impossible. As to anything like agricultural occupation, it is manifestly out of the question, and there is no sufficient space for horticulture. The construction of the building is entirely at variance with the principles of treatment now held. Such buildings should be cheerful, open to the sun, and have nothing to depress the spirits. The present Hospital was constructed at a time when strait-waistcoats were in vogue, and every patient was immured in a gloomy cell. He alluded on these points to the published opinions of the Commissioners, and to those of Drs. Conolly and Webster. He showed that the governors, instead of being losers, would be absolutely gainers by accepting the sum of £150,000 offered to them by the governors of St. Thomas's; that they would be able to build a magnificent asylum for 500 patients, constructed on modern principles, and would be left with £10,000 to £20,000 in hand. He said that an asylum ten miles from town would offer advantages for the residence of pupils. Dr. Conolly's clinical lectures at Hanwell had been largely attended, whilst the lectures given at Bethlehem and St. Luke's had few or no hearers. Another argument was that a country Hospital with the revenues of Bethlehem might receive patients above the class of paupers, but who, although able to contribute something towards their maintenance, were not in a position to pay the minimum sum required by other Asylums. The number of patients in Bethlehem, besides the criminal lunatics, rarely exceeded 200; for a series of years it had not been more than 240. With their income of £20,000 a-year, the Governors ought to maintain from 480 to 500 patients; and if they admitted persons whose friends could pay a certain sum towards their maintenance, the number might be increased to 600. He concluded by moving the production of certain papers in reference to the revenues and statistics of Bethlehem.

The sole objection we take to any part of Lord Shaftesbury's very able speech is to his sweeping assertion that "nineteen-twentieths of the Medical men of this country understand little more of the scientific treatment of lunatics than they do of Hebrew and Chaldee." Such a statement is absolutely false. All educated Medical men understand the received principles on which the treatment of insanity is founded, although practice in lunacy is necessarily most familiar to the specialists. Lord Granville expressed his cordial sympathy with the object Lord Shaftesbury had in view, and the production of the papers was agreed to.

In the House of Commons, a long debate took place on the M'Lachlan case. The discussion principally turned upon the state of the law of Scotland in respect to criminal proceedings, and the prerogative of the Crown as exercised by the Home Secretary. The evidence in its Medico-legal aspect was not discussed.

On Monday, the 29th, in the House of Commons, the amended report of the Public Works (Manufacturing Districts) Bill was agreed to.

In the House of Lords, on Tuesday, Lord Shaftesbury moved an address to Her Majesty praying that an inquiry into the physical and moral condition of the milliners and dressmakers be made by the Royal Commission now sitting on "the state of children and young persons in trades and manufactures not regulated by law." Lord Granville stated that the subject had been already referred to the Commission, in consequence of which the motion was withdrawn.

In the House of Commons, Lord Raynham moved the second reading of the Poisoning Bill, the object of which was to require the adoption of certain precautionary means, so as to guard against accidental poisoning. Sir G. Grey objected to some of the provisions of the bill as unnecessary, and moved as an amendment that the bill be read that day three months. The amendment was agreed to without a division, and the bill was therefore lost.

On Wednesday, the House of Commons, by a majority of 35, acquiesced in the second reading of the Weights and Measures Bill, thus confirming the recommendation of the Select Committee of last year in favour of the metric system. There are two ways in which the passing of this bill will probably affect our Profession. First, with regard to the Apothecaries' weights:—if the metric system becomes generally adopted in ordinary trade, we may certainly look for its introduction at no distant period in pharmacy. Secondly, with regard to our fees:—as the metric system of weights and measures will necessitate a decimal system of currency, the sovereign with its satellite shilling will, if the Profession be not careful to resist such an innovation, become represented in the eyes of a willing public by a 20-franc piece and a franc. Even a fee of 25 francs would be a fractional diminution of the time-honoured guinea, about equivalent to an income-tax of twopence in the pound on the Physician or Surgeon's gross receipts.

The Contagious Cattle Diseases Prevention Bill was withdrawn by Mr. Holland on a promise from Mr. Bruce that the Government would introduce a bill to continue the present act. Mr. Bruce said that Mr. Gamgee's report was at present under the consideration of the Government, who intended introducing, if possible, a more complete measure in the next Session.

ALLEGED CRIMINAL POISONING IN PEMBROKESHIRE.

A coroner's jury have returned a verdict of wilful murder against a woman named Lydia Williams, living at Fishguard, in Pembrokeshire, who is supposed to have killed her husband by the administration of arsenic. The dying declaration of the husband, the symptoms exhibited during life, and the circumstantial evidence generally, fairly support the verdict. Deceased was taken ill on April 12, and he lived up to May 24. The early symptoms, as described by witnesses, appear to have resembled those of irritant poisoning, and the later might be referable to the peculiar action of arsenic on the nervous system. Up to April 25 there was sickness and vomiting, and redness of the conjunctivæ. On April 28, when he was seen by Mr. Wathen, of Fishguard, there was numbness and loss of power in the arms and legs, but at that time there was nothing marked about the tongue, lips, or eyes, and no excoriation of the anus. The bowels had been constipated for two or three days. Up to April 23 his food had been prepared by his wife. After that time his food was prepared by his daughter. The post-mortem examination was made by Messrs. Wathen and Brown. The following is their report:—

> "External Appearances:—No excoriation of mouth or anus; skin exfoliating; body warm; rigor mortis not very marked; pupils natural; meatus urethræ not irritated. Cavity of Thorax:—Pleuræ extensively adherent, for the most part old. A few tubercles in left lung, in other respects the lungs were healthy. Pericardium contained about an ounce of fluid; no adhesions. A patch of recent lymp on external wall of heart; valves healthy. Abdominal Cavity:—Urethra, bladder, and rectum healthy. Descending colon peculiarly contracted and congested with ecchymosis in numerous places; mucous membrane easily peeled off; ascending colon greatly congested with ecchymosis near the cæcum; ilium containing a bloody-coloured mucus. Kidneys:—One mottled. Great congestion with ecchymosis along the great curvature of the stomach; duodenum peculiarly granulated, mucous membrane easily peeled off. Liver and gall-bladder healthy."

The analysis was made by Professor W. Herapath, of Bristol, who failed to discover any arsenic. He stated that when he received the viscera he thought it hopeless to discover arsenic after the lapse of thirty-one days. He, however, had apparently no hesitation in stating that the appearances in the alimentary canal were due to that poison. In evidence he said:—

> "The state and appearance of the various parts exhibited all the *secondary* effects of arsenic. They were in a state of intense inflammation, and of that character which leads almost to a proof of its being the effect of a heavy irritant poison. I should tell those gentlemen who are not acquainted with poisons and their effects, that every poison has its own peculiar character, in order that they may understand what I now show. Every poison has an inflammatory tint peculiar to itself. Phosphorus produces a bright scarlet, arsenic a deep red, oxalic acid another, and mercury another. I now exhibit the pyloric end of the stomach through which food passes into the duodenum, and from thence into the intestinal canal; also the greater curvature of the stomach, to which, in man, anything of a heavy character would naturally gravitate, on which will be seen two patches of ecchymosis tending ultimately to produce ulceration. (A healthy comparative stomach was also shown.) I also produce a portion of the duodenum, which scarcely shows the same granular character it did when moist. It was also very highly inflamed. (A comparative duodenum was also shown of a pale yellow, while that of the deceased bore a dark-red colour.) I should, if these parts had been exhibited to me without any information of the previous symptoms, have judged they were the result of a heavy irritant poison. I have seen a great many instances of general inflammation of the intestinal canal, but nothing of a natural character similar to this."

We must acknowledge that this evidence appears open to some exception. We do not believe that the most experienced toxicologist could with certainty predicate the particular irritant used from the tint of redness it had produced. In cases of poisoning by arsenic, the red colour of the mucous membrane of the stomach has been found to present great variations in degree. It is no doubt true that well-marked cases are met with in which the shade of redness may be typical, but whilst differences are known to be of frequent occurrence, it is trenching on dangerous ground to adduce the existence of a particular hue as Medico-legal evidence in favour of the action of a certain poison, which poison, nevertheless, has not been detected.

Supposing the coroner's verdict correct, a remarkable feature in the case is the long period—thirty-one days—during which the deceased lived after the administration of poison had ceased. Professor Herapath stated that he had never seen an instance in which so long an interval had elapsed. This alone would, we think, render it well nigh impossible to ascribe the post-mortem appearances to the secondary effects of any particular agent. Both arsenious and oxalic acids appear to have been in the prisoner's possession.

FROM ABROAD: FRENCH CRITICISM—A NEW SOURCE OF VACCINIA—M. BARRAL ON BREAD—SALARIES TO FRENCH PHYSICIANS IN PUBLIC ASYLUMS.

In a note upon M. Demarquay's observations on the mode of administering chloroform in the London Hospitals, we ventured to assert that the completeness of this is far preferable to the half-and-half procedures prevalent in the Paris Hospitals. These last may enable what M. Demarquay calls the "moral sympathetic ties" to be kept up between patient and practitioner, but at the cost of an immense amount of suffering, which might be well spared. A critic in the *Union Méd.* regards this as a mere bit of John Bull positivism. The object of chloroform is the relief of pain, and chloroform must therefore be given as long as there is fear of pain. "It matters little if death result, as indeed it often does. It is clear enough that the hardness of heart of the Surgeon, and his proverbial insensibility, are far more applicable on the other side of the channel." It seems that even popular prejudices may thus be caught up and used as lawful arms *intra fratres.* The writer should, however, know that death from chloroform administered in a Hospital is a very rare occurrence, and that the records of accidents arising from chloroform clearly prove that in many cases these have occurred when very trifling quantities have been administered.

At the last meeting of the Académie de Médecine, M. Bouley, the celebrated veterinarian, brought forward what he called a fact of a revolutionary character. A horse, suffering from aphthous stomatitis, having been brought to him, he inoculated the udder of a cow with some of the fluid of the aphthæ, and, to his surprise, pustules, presenting every physical character of the finest cow-pock, were the result. From these pustules two infants were inoculated. In the one nothing appeared, but the other exhibited very fine pustules, entirely analogous to those induced by vaccine lymph. Moreover, five students of Alfort, who had all been previously vaccinated, were inoculated by this new virus, which determined in them a more or less marked pustulation, resembling that caused by vaccination. This fact is of great interest, and will doubtless give rise to much discussion here as well as in Paris.

M. Barral has laid before the Académie des Sciences some interesting results of the investigations he has been making upon the crust and crumb of bread. If the same weight of dried crust and of dried crumb be exhausted by means of water, it will be found that the soluble portion of the crust contains from 8 to 10 per cent. of nitrogen, while the crumb contains only from 2 to 3 per cent. Thus, the gluten of the crust must have undergone a remarkable alteration while exposed to the high temperature of the baker's oven, its soluble portion being rendered more azotized than the juice of meat.

By a recent decree, the principal Physicians of the French public asylums for the insane have been divided, as regards payment, into five classes, the salaries commencing at 3000 francs, and increasing by 1000 francs in each class until 7000 francs are reached. The Assistant-Physicians are divided into three classes, the salaries rising from 1800 to 2400 francs.

REVIEWS.

The Urine in Health and Disease. Being an Exposition of the Composition of the Urine, and of the Pathology and Treatment of Urinary and Renal Disorders. By Arthur Hill Hassall, M.D., etc., etc. Pp. 416. London: 1863. Second Edition.

Although this work is entitled a second edition, it might with more propriety be called a first, for it bears no resemblance to the little book which preceded it, except in its title. The present volume is a great improvement on its predecessor, and is one which will be found of use by the busy Practitioner; for, in spite of the multitude of works that have recently appeared on the urine, this one cannot fail to be read with profit.

The composition of the urine, we know, was looked upon by the ancients as offering a clue to the various morbid changes occurring in the human frame, and what was true then is doubly true now, for there can be little doubt but that at the present day the composition of the urine is in many cases the safest guide to the diagnosis and treatment of several important diseases. There are, indeed, few affections about which interesting information may not be gleaned from the state of the urine. We cannot therefore say that we at all regret the appearance of so many works on this subject. In fact we would gladly see some more, for there is still wanting the arrangement and simplification of the immense amount of knowledge which has recently accumulated in this field from the combined efforts of the chemist and pathologist. We have had microscopical writers, we have had chemical writers, we have had physiological writers, and we have had no lack of pathological writers, but all their works have lacked the essential something, which is not to be defined in words, and which will spring from the brain, which within itself contains, not a mere smattering, but a profound knowledge of microscopical, chemical, physiological, and pathological phenomena, and until some learned author can be found who has not only studied but mastered all these subjects, so long will our appreciation of the true value of urinary analysis remain in abeyance. Take up which ever author one may, no matter how big his book, the contents are invariably all one-sided, and this comes from its author being only master of one or two of the required subjects. As it is not with things as they should be, however, but with things as they are, that we have now to deal, we shall restrict any further remarks we have to make entirely to the book before us.

The first thing that strikes one on opening the volume is the profusion of illustrations; but no one who knows the author can be surprised at this. Every man has his foible, and woodcuts are Dr. Hassall's. We shall not, however, find fault with him on this point, for the artistic finish of the illustrations is admirable, and, as regards the subjects, these are for the most part judiciously chosen. But there are two of them which we cannot let pass without special notice. The one is a cut of peculiar nail-like crystals of a sulphate, said to be probably sulphate of potash from human urine, and in the context it is said that sulphates crystallise readily from the urine, all that is required to obtain them being to allow a few drops of urine to evaporate spontaneously on a slip of glass. Again, a little further on the author remarks, "It frequently crystallises in the urine in the form of beautiful rosettes and perfect and elegant dumb-bells. Whether these crystals are pure, and are composed only of the sulphate, has not yet been determined. Attention was called to the frequent occurrence in the residues of small quantities of evaporated urine of these soluble dumb-bells by the author many years since." Now, it appears to us that statements like the foregoing will rather confuse than enlighten the majority of ordinary readers, for the natural conclusion will be that sulphate of potash is a urinary deposit in the ordinary sense of the word, namely, a deposit forming spontaneously in the urine. This of course cannot be the intention of the author, for sulphate of potash is so soluble a salt that it never occurs spontaneously. On the contrary, it cannot be obtained either in normal or pathological urine, except by artificial means. A still greater error, we fear, has been committed by the author at page 215, where he represents a number of crystals, with the subjoined letter-press, "Crystals of a soluble phosphate, most probably of neutral phosphate of soda, and nucleus of chloride of sodium from human urine." How a chloride, and of all things chloride of sodium, which is the most soluble of the urinary constituents, could form the nucleus of a phosphatic crystal we are somewhat at a loss to understand.

In speaking of the tests and sources of fallacy of the tests for albumen in the urine, the author justly remarks—

"There are several fallacies to which the tests of heat and nitric acid are liable.

"Thus, heat produces a deposit in urine which contains an excess of earthy phosphates; this precipitate is distinguished from albumen by its solubility in nitric acid.

"It does not coagulate albumen when the urine is alkaline, and which therefore should in such cases be rendered acid previous to boiling. Neither will the urine, when very acid, coagulate by heat alone.

"Nitric acid, when added in minute quantity to urine, prevents the coagulation of the albumen, and even when coagulated, added in too large amount, dissolves it in some cases, the acid should therefore be freely, but still not too largely, added."—P. 308.

And as regards treatment, he says:—

"In the treatment of the chronic forms of this disease, we should never lose sight of the fact that they are rarely local affections, but frequently have a constitutional origin, which is often the *fons et origo mali.* Having ascertained that the renal disease has originated in some constitutional derangement or condition, the nature of this should, as far as practicable, be determined, whether it is connected with the scrofulous diathesis, or with a gouty tendency. . . .
If the disease is in an early stage it may possibly be cured; in all cases and stages much benefit is usually derived from treatment, great relief obtained, and life prolonged.

"In nearly all cases it will be necessary to improve the constitutional powers by generous and carefully regulated diet, by pure air, especially that from the sea, and by the administration of suitable tonics, particularly some of the less stimulating preparations of iron, including the citrate and the sesquichloride of iron. The administration of iron is imperatively demanded, because of the altered state of the blood and paucity of red corpuscles. . . . . .
Care must also be taken to relieve the kidneys by promoting elimination from the bowels and skin. . . . . .
Gallic acid, given in doses of ten or more grains three or four times daily, will sometimes lessen the albumen. Tincture of the sesquichloride of iron exerts a more constant effect than even gallic acid."—P. 336.

The author having described the anatomy of the supra-renal capsules, makes some very judicious remarks on their supposed connexion with bronzing of the skin; he says:—

"It has now been fully proved that there is no invariable or essential connexion between supra-capsular disease and bronzing of the skin, such disease in various forms may exist without bronzing, or this may be present, and the capsules be perfectly healthy. Nevertheless, the two would appear to be associated with remarkable frequency. Discoloration of the skin occurs, however, under such a variety of circumstances, that it seems scarcely reasonable to suppose it to be dependent exclusively upon disease of one particular organ. That disease of the supra-renal capsule is frequently accompanied by profound constitutional disturbance is certain; and it seems probable that this is due less to interruption of its functions than to the effects of the disease on the ganglionic nerves by which the capsule is so freely supplied, and by which it is surrounded."—P. 345.

From these quotations it will be seen that we are justified in recommending this work to the attention of our readers.

A Manual of Chemical Analysis, Qualitative and Quantitative, for the Use of Students. Part I.—Qualitative. By Henry M. Noad, Ph.D., etc. Pp. 211. London: 1863.

A few Numbers ago we called attention to a work on volumetric analysis; we have now to introduce to our readers one of an entirely different stamp. It is the first part of a manual of chemical analysis intended for the use of students, and, as such, we do not in the least doubt that it will fulfil the intentions of the author. If, indeed, it were possible to teach chemistry anywhere except in the laboratory, we have little doubt but that the volume before us would do so, for even the minutest details of manipulation and apparatus are briefly and clearly explained. If there is one part of the book that pleases us more than another, it is that devoted to the detection and recognition of some of the more important vegetable substances,—a department which may be consulted with advantage by the Practitioner as well as by the student, the tests of the different substances being concisely given. As an example we may quote his tests for morphia:—

"Nitric acid produces with morphia or its salts a dark orange colour, gradually passing into a yellow.

"A mixture of nitric and sulphuric acids colours morphia green.

"On adding the alkaloid, or one of its salts, to a solution of iodic acid, iodine is set free, imparting a brown colour to the liquid; if some starch be previously added to the iodic acid, the colour becomes blue.

"Sesquichloride of iron produces a blue precipitate, soon passing into a dingy green, and finally to a brown.

"Bichloride of platinum produces a granular orange-yellow precipitate.

"From a solution of terchloride of gold the metal is gradually reduced."

In the same concise way he gives the others. We shall just quote one more, namely, the tests for nicotine, the poisonous alkaloid of tobacco:—

"Terchloride of gold produces in aqueous solutions a reddish-yellow precipitate.

"Bichloride of platinum causes a yellow precipitate.

"Infusion of galls, a copious white precipitate.

"Chloride of mercury, protochloride of tin, and acetate of lead, white precipitates.

"Chlorine gas decomposes nicotine with the evolution of hydrochloric acid gas, and the formation of a blood-red liquid, which, on exposure to the rays of the sun, becomes colourless.

"Solution of iodine produces, with solution of nicotine, a reddish-brown precipitate, the colour of which is destroyed by potassa and by ammonia. The volatility of nicotine is its most marked test."

It is thus seen that the author has wasted no words,—a point of inestimable value to the student of the present day, whose time is too precious to be wasted in wordy explanations.

FOREIGN CORRESPONDENCE.

GERMANY.

BERLIN, June.

THE past winter has been unusually unhealthy here. Although there was no severe cold, yet disease in the most various forms has been rife with us. Scarlatina, measles, and diphtheria were most frequent, and proved fatal in a very large number of cases. Amongst others, Professor Frerichs, well known to your readers as author of a clinical treatise on the "Diseases of the Liver," suffered from a bad form of diphtheria, and had to go to Italy in order to recruit his health.

The Medical Societies have not been inactive during the Session. In the Hufelandian Society, Professor Martin read, a short time ago, an interesting paper on "Febrile Puerperal Affections." Amongst these we ought not to include accidental affections, having no connexion with parturition as such, as, for instance, typhoid fever, small-pox, inflammation of the lungs and intestines, which sometimes began during pregnancy, and were protracted into the puerperism. What more properly belonged to this province were local injuries of the cervix, the uterine end of the vagina, contusions and extravasations in the neighbourhood of the genitals, and which were frequently followed by serious consequences. The symptoms were,—pain in the abdomen, considerable increase of temperature, and retention of the urine. If the injury had penetrated to the peritoneum, extravasation and sanguinolent effusion took place into the cavity of the abdomen, and pelvic abscesses were formed, which would make their way through the cervix uteri, the vagina, bladder, rectum, and the abdominal parietes.

Another set of such diseased conditions was catarrh of the vagina and uterus caused by cold or gonorrhœa. They accelerated parturition if they came on during pregnancy, as the morbid secretion of the cervix uteri caused premature rupture of the membranes. After birth the rate of pulsation and the temperature were increased, the abdomen was very sensitive to touch, the lochia had an offensive odour. In consequence of this, the involution of the uterus was frequently impeded, and chronic endometritis caused.

Other diseases incident to this period were diphtheritis of the vagina and uterus. There were mostly rigors immediately after parturition in such cases; the temperature was increased to 9° above the average; the pulse rose to from 100 to 120, and there was general prostration. The disease was often caused by infection, but by no means exclusively or even chiefly by cadaveric infection; on the contrary, it was rather by infection from one patient to another, by syringes, linen, bedding, clothes, etc. It also came on after putrefaction of bits of the placenta and the membranes which had not been removed from the uterus. An examination should never be made if any cadaveric poison adhered to the finger; and all communication between the several patients should be cut off altogether. Other febrile diseases during the puerperal state were inflammation of the Fallopian tubes, with effusion into the abdominal cavity, the first symptom of which was mostly acute local pain, felt suddenly by the patient on getting up from her bed; and inflammation of the mammæ and nipples.

The treatment of these affections should be regulated according to the aspect of each individual case. Compresses moistened with water are preferable to poultices. The temperature of the water used for them should be from 68° to 70°, but, if there was great increase of temperature, cold water, and even ice, might be employed. These compresses should be changed, according to circumstances, from every quarter of an hour to every two hours. Their immediate effects were decrease of the temperature, the effusion, and the meteorism. Bleeding was scarcely ever required; but, if an abstraction of blood should appear expedient, only leeches, but not venesection, should be employed. At the same time, frequent injections of mucilaginous liquids ought to be made, in order to remove the lochia and the effusions, and to prevent their decomposition.

Professor Traube lately communicated to the Medical Society a series of researches on such poisons as have an immediate influence upon the heart's action. Such substances, he said, were chiefly carbonic acid, carbonate of soda, digitalis, nicotine, and cyanide of potassium. They excited both nervous systems of the heart, the regulatory as well as the motor one—the pressure was increased, and the pulse diminished. With regard to the so-called cumulative effects of poisons, little certain was known. It sometimes seemed as if a poison which had apparently for a long time been given in vain, all at once produced powerful effects; and this was chiefly believed to be the case with digitalis. But the observations of such phenomena had not been accurate. There were always symptoms which, on close observation, could be shown to precede for a considerable period those very violent phenomena. Thus, if we gave digitalis in pneumonia, we might suddenly observe a considerable diminution of the pulse and the temperature, with tendency to vomiting, singultus, and collapse; but, in reality, there had been before that a decrease of temperature as well as retardation of the pulse. Towards the end of pneumonia, Professor Traube had sometimes found a phenomenon which had been entirely overlooked until now, and had merely been guessed at by Hippocrates, viz., that various substances have then a much more powerful physiological action than in the commencement of this disease. The same might be said of bleeding, viz., that its action on pulse and temperature was much more considerable at the end than it was at the beginning of the malady. The so-called "cumulative" action of digitalis took place chiefly if the medicine was given in the later stages of pneumonia.

Some poisons were of such kind that one dose diminished the action of the subsequent one, while in others each dose had its own effect, or even augmented that of the former ones. Amongst the former of these substances nicotine might be mentioned. The twenty-fourth part of a drop of nicotine injected into the jugular vein of a dog effected a great diminution of the rate of pulsation, after which the pressure was increased. The second dose acted less, and the third again less. If we thus gradually injected large quantities of nicotine, any further action of that poison was counterbalanced.

Cyanide of potassium was, in this respect, altogether different from nicotine. It likewise diminished the rate of pulsation, after which this became augmented. It paralysed the regulatory nervous system of the heart; but each dose was efficacious, even if the tenth part of a grain was given after one-fifth had been administered before. If digitalis was given, each succeeding dose added to the effect of the former ones. This difference of action was dependent upon the poisons affecting different chemical constituents of nervous matter.

There was no poison which had a primary paralysing effect upon the nerves, but the action was always at first exciting and afterwards depressing. It was said in the treatises on poisons that cyanide of potassium had at once a depressing effect; but this was incorrect, as that poison, on the contrary, excited at first both nervous systems of the heart. Contrary to Professor Kölliker's assertion, M. Traube had found that it had no destructive influence upon the heart.

There might be simultaneous action of several poisons in the system—a fact which justified those old prescriptions which it is now the fashion to ridicule. Even if the action of poisons was very powerful, there might be striking effects of others. If the motor system of the heart began to be paralysed by digitalis, nicotine might alter the heart's action in a contrary sense, as if no digitalis had been given at all. Carbonic acid had, in the same manner, an antagonistic action to nicotine. In experiments of this kind, it was important that the action of the muscular system of the animals should be first suppressed. This might be done by the administration of woorara, a certain dose of which annihilated the power of all voluntary muscles without influencing the heart's action.

GENERAL CORRESPONDENCE.

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THE DEATH OF SIR CULLING EARDLEY—RE-VACCINATION *NOT* DANGEROUS.

Letter from Mr. W. B. Kesteven.

[To the Editor of the Medical Times and Gazette.]

Sir,—Permit me to offer a few comments upon your article of the 6th inst., from the tone of which it would appear that you regard the operation of re-vaccination as attended with danger. At the same time I have no hesitation in undertaking to reply in the negative to the heading affixed to the letter of Dr. Miller—"Is Re-vaccination Dangerous?"

To this letter you call special attention, as "recording cases of small-pox during vaccination." Pardon me, Sir, if I ask you to reverse this designation, and to speak of it as *recording cases of vaccination during small-pox.* This I will show from the laws of the development of small-pox.

Dr. Miller tells us that, "two cases, adults, both good-looking women, were re-vaccinated with healthy lymph, selected with great care by the superintendent of vaccine; but in both cases, on the eighth day, variola set in, of a confluent form," etc.

And again Dr. Miller writes:—"The most painful case of all was the following:—I vaccinated, in August, 1854, when no epidemic prevailed, a healthy infant, the first child of a mother aged twenty. The vesicle passed through all its stages to maturation. The mother was suffering from 'prickly heat,' and had abraded the skin on the right fore-arm by scratching it. In carrying the child the vesicle burst, and the lymph trickled over the abraded surface; in short, she accidentally re-vaccinated herself. On my visit to inspect the child's arm, the mother showed me her own. I treated it with indifference. On the sixth day she was attacked with rigors, followed by fever; on the eighth day a pustular eruption appeared, which proved to be variola of the confluent form." This woman died.

These cases, I respectfully submit, do not warrant the conclusion drawn from them by Dr. Miller and yourself, viz., that they point to dangers from re-vaccination. Looking at them by the light of the laws of the development of small-pox, viz., twelve days of incubation, and forty-eight hours of premonitory illness before the appearance of the rash, we can see that Dr. Miller unconsciously vaccinated two persons who were already subjects of the incubation stage of small-pox, while the poor woman accidentally re-vaccinated was in the like predicament. These cases therefore, I repeat, afford no argument whatever bearing upon re-vaccination, and have about as much relation to the cause of Sir Culling Eardley's death as Tenterden steeple has to the Goodwin sands.

I have ventured thus freely to criticise your remarks, because the history of small-pox furnishes so constantly accounts of the arrest of epidemics of the disease by re-vaccination, and affords so few instances of harm following thereon, although extensively practised in civil and military life, that I do not see that we are justified in adding to the groundless fears of the public as to the danger of re-vaccination, aroused by the death of Sir Culling Eardley.

I am, &c.
W. B. Kesteven, F.R.C.S.

Upper Holloway, June 23.

EXANTHEMATA COMPLICATING THE PARTURIENT STATE.

Letter from Dr. Edward Ilott.

[To the Editor of the Medical Times and Gazette.]

Sir,—In reference to the opinion of Dr. Simpson that pregnant women, rarely parturient, never recover when attacked by either of the exanthemata, I beg to bring before you two cases that have lately occurred in my practice. One had the eruption of scarlet fever profusely out within one week of her confinement; there was severe scarlet fever prevalent in the row of houses in which she lived. She had the disease severely, with sloughing angina, and recovered. Another woman had the incubative fever of small-pox on her at the time she was confined (at the full time). In forty-eight hours she was covered with the papulæ of small-pox. She had the disease with moderate severity, and recovered so well that she was up and about almost as early as after her former confinements.

I am, &c.
Edward Ilott,
L.R.C.P. Lond., M.R.C.S. Edin.

Bromley, Kent, June 29.

REPORTS OF SOCIETIES.

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ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 23, 1863.

Mr. Partridge, President, in the Chair.

Mr. T. B. Curling made some

OBSERVATIONS ON STERILITY IN MAN, WITH CASES.

The object of this communication is to show that a want of aptitude to impregnate may coexist with the capacity for sexual intercourse, or, in other words, that man is subject to sterility independently of virility. The Author states that sterility in man may arise from the following causes:—1. Malposition of the testicles. 2. Obstructions in the excretory ducts of the testicles. 3. Impediments to the escape of the seminal fluid. 1. *Sterility from malposition of the testicles.*—The author remarks that the opinion of John Hunter, "that when one or both testicles remain through life in the belly they are exceedingly imperfect, and probably incapable of performing their natural functions," is corroborated in a remarkable manner by the facts adduced in this paper. After describing the condition of detained testicles, the author states that the question to be considered is, whether a testicle that has not passed into the scrotum can secrete a fertilising fluid. He assumes, as quite established, that to possess this property the semen must contain zoosperms. Having referred to the observations of Professor Goubaux on horses, and to those of Follin and Godard on man, the author remarks that the proofs adduced by these observers were not sufficiently cogent and numerous to establish the law that cryptorchics are infertile; and it could not be expected that assent should be given to results so remarkable and unexpected without evidence of the most convincing character. Opposite opinions continue to be entertained, and have recently been avowed by Dr. Alfred Taylor. The author gives the particulars of two cases of double detained testicle in married men (cryptorchics) without children; and also two cases of single detained testicle, the second testicle, in one case, being completely atrophied, and in the other having been removed by operation. In all four cases the copulative powers were satisfactory; but the ejaculated semen was destitute of spermatozoa. The author gives a table, which includes these four cases and five others, three described by Godard, one by Puech, and one by the President of the Society, making nine in all, in which the fluid ejaculated by men with retained testicles was submitted to examination and found to be destitute of spermatozoa. In confirmation of the results obtained in these cases, he deduces some observations made upon the lower animals by Messrs. Goubaux, Follin, and Godard; and he furnishes a table of eight cases in which the fluid found after death in the substance of a retained testicle—in the epididymis or vas deferens, or in the vesicula seminalis on the side corresponding to the misplaced gland—had been examined and found destitute of spermatozoa. They have not been discovered after death in the spermatic ways of a detained testicle in any one instance that he knows of. The facts which have been brought forward as opposed to the conclusion that cryptorchics are sterile, are chiefly instances in which they are reputed to have procreated children. Three cases are cited: one recorded by Mr. Poland, another communicated by Mr. Cock, and a third by Mr. Durham. The author feels no little hesitation in calling in question the claims to paternity in these cases; but remarks that as yet no case has been found in which a retained testicle has been fully proved to be capable of secreting a fertilising fluid. The observations collected in the paper seem sufficient to show that, as a rule, they do not; and though he sees no valid reason why there should not be exceptions, still the evidence is wanting to establish the exception in either of the instances of reputed paternity which have been mentioned. 2. *Sterility from obstructions in the excretory ducts of the testicle.*—After giving a brief account of Gosselin's researches, in which he showed that after attacks of gonorrhœal epididymitis the channel for the semen is temporarily and sometimes even permanently obstructed, causing, when the epididymitis is double, sterility, the author relates three cases occurring in his own practice of permanent obstruction in the epididymis of both testicles in married men whose wives were barren. In all three the patients had vigorous powers, but there was a total absence of spermatozoa in the ejaculated fluid. The author insists on the importance of careful and prolonged treatment in cases of epididymitis to obtain the removal of inflammatory effusions. The author remarks, that the passage of the semen from the testicle may be prevented by congenital absence of the vas deferens, which, if double, would occasion sterility. A case of the kind, in which the testicles were sound, had been observed by John Hunter. The excretory duct of the testicle is liable also to be interrupted by tubercular deposits in the epididymis. It is well ascertained that this part is much more frequently the seat of tubercle than the body of the gland, and is often extensively diseased, whilst the substance of the testicle remains sound. The author gives a case in point, in which the semen was destitute of spermatozoa. 3. *Sterility from impediments to the escape of the seminal fluid.*—It is well known that a close stricture in the urethra so completely interrupts the passage of the seminal fluid that in ejaculation it regurgitates into the bladder, where it mixes with the urine. In erection of the penis the urethra becomes narrowed, so that a stricture which offers but a slight obstacle to the flow of urine may under congestion be sufficient to impede the emission of semen. The author has grounds for concluding that sterility from chronic stricture in the urethra exists to a greater extent than is commonly supposed. As the condition is one which is in most cases remediable, it is only necessary to call particular attention to it as not an uncommon source of infertility. The author alludes also to a case in which he had reason to conclude that sterility was consequent upon inflammation and abscesses near the prostate gland, occasioning obliteration of the ejaculatory canals. Two important and delicate questions arise out of these inquiries. 1. Whether a man who has the inclination and power to copulate, but who is nevertheless sterile, is justified in contracting marriage. 2. Whether this condition is a sufficient ground for divorce. That a man who is unable to fulfil the command, "to be fruitful and multiply" is right in disappointing the hopes and periling the happiness and perhaps health of a woman, cannot, the author thinks, be maintained by any casuist, and in some of the cases related in the paper he has felt it his duty to give advice in accordance with this opinion. It cannot be doubted that in women ready for conception, frequent sexual excitement without impregnation is very likely to prove injurious to health, and the author shows from the writings of Dr. West that diseases of the ovaries and uterus originate from this cause. The second question is one upon which a Surgeon is scarcely called upon to pronounce an opinion. But the author ventures to remark that as sterility in women is not considered an adequate cause for divorce, so the man ought not to pay such a penalty for unsuspected unfruitfulness.

The PRESIDENT then related several cases bearing on the paper. A gentleman, aged 34, had been married eight years to a healthy wife. He had strong sexual desire, and frequent intercourse, with abundant emission, but no family. He died of tumour in the groin, which was found after death to have been due to encephaloid disease of a retained testis. The other testis, which was also retained, was of the natural size, but did not contain any spermatozoa. Unfortunately the disease had extended to the bladder, so that the condition of the vesiculæ seminales could not be made out. In a second case, not under his (the President's) observation, a gentleman whose testes were retained, and who had frequent intercourse with his wife, ejaculated a transparent fluid, but it did not contain spermatozoa. A gentleman, 34 years of age, whose testes were undescended, had frequent sexual intercourse and free emissions, but the fluid, which was examined four times, did not contain spermatozoa. This gentleman was desirous of knowing if he ought to get married. The President told him that if he did he would have no children. In a fourth case, one testis was misplaced in the perineum, the other was normal. He (the President) tried by an operation so bring it to its natural position, but did not succeed. He subsequently removed it. It did not contain any spermatozoa.

Dr. WEBSTER said the subject discussed by the Author of the paper just read was of much interest, and he believed with him that sterility oftener depended upon males than females. In support of such an opinion, he would refer to nearly 300 married men within his own acquaintance who, during their matrimonial state, never begot any offspring, excepting one instance, where a child was born after the mother had remained barren during fifteen years. In the list kept by Dr. Webster no person was entered until the parties had lived together for at least five years; and although he never investigated the matter so scientifically as Mr. Curling, there appeared little doubt the fault mainly depended upon the male, since various females who continued childless throughout their first marriage, on contracting a second became mothers; whereas there only occurred, in reference to the opposite sex, the solitary example already mentioned. It might, however, be added as curious that a large proportion of the sterile individuals Dr. Webster had thus recorded were Medical Practitioners; and, moreover, what seemed also rather singular, seven of these couples lived in a thoroughfare having the same designation, but with different numbers on their respective residences. Regarding the chief cause of barrenness in the various illustrations to which Dr. Webster referred as coming under his immediate observation, none having been patients, it was impossible to speak definitively; nevertheless, as analogous cases are not uncommon, the inquiry mooted by Mr. Curling was therefore important, both medically and in its social relations, besides bearing specially on questions of jurisprudence.

Mr. WYATT asked if any of the gentlemen Mr. Webster spoke of had suffered from spermatorrhœa in youth.

Mr. ACTON was pleased to think that the subject of sterility had been brought before the Society, thus proving that the affections of the reproductive organs were at length occupying that Professional attention which their importance demanded; and he hoped that their treatment would never be again tacitly given up to the quacks, but pass into the legitimate domain of science. In the presence, then, of this Professional neglect, it was not surprising to find so much public ignorance existing on the subject of the paper—a subject, it must be admitted, still requiring much original investigation. He (Mr. Acton) was indisposed to allow that only three causes of sterility existed. The following was not of uncommon occurrence:—A young entire horse, who has been a sure foal-getter, has, say, forty-five mares put to him; none of these mares become strutted (as it is called). Here was sterility on a large scale, and opened a wide field for inquiry as to whether the cause was obesity or sexual exhaustion from previous seasons' covering—causes which he had fully dwelt on elsewhere as commonly influencing sterility both in man and beast. It might, then, be consolatory for the Medical husbands alluded to as having no family to know that the Profession did not consider that they must necessarily suffer from undescended testes or epididymitis—the result of old gonorrhœas. After all his experience, he (Mr. Acton) was disposed to think that the childlessness of many women did not depend upon the fault of the husbands, but upon the fact that some of the canals appertaining to their own reproductive organs were blocked up either temporarily or permanently. Practically, it was found that too often the opinion of the Profession was not asked by patients before marriage. The saddest cases met with in daily practice were those of previously strictly continent men, who married, and then learnt for the first time that they were incompetent to their marital duties; it was then that the Medical man was first called in, and his opinion asked as to the cause of sterility. The answer was not such an easy one as had been assumed. The reason arose from many social causes, which could not be given on the present occasion. If it was truly stated that modern accoucheurs were of opinion "that frequent sexual excitement without impregnation was likely to prove injurious to healthy women," he must join issue with them. That the modern civilised lady was very subject to uterine or ovarian disease he would admit; but to attribute these ailments to such a cause as that above alluded to was not founded on observation, seeing that so many single young women were as great, if not greater sufferers than the married, though sterile. He must likewise raise his voice against the assertion that epididymitis was a frequent cause of sterility, seeing the number of instances of young men who had been affected with this ailment who afterwards had a family. In treating of the causes of sterility he would assert that the prognosis was not so unfavourable as had been stated. The Fellows of the Society must be aware of numberless instances of temporary sterility yielding to proper remedies, thus proving that the affection did not depend alone upon mechanical impediments to impregnation, but, like its kindred subject, impotence, was a frequently remediable affection.

Mr. Fergusson said he was disappointed that in a paper by a gentleman of so great experience as Mr. Curling so little evidence could be brought forward on the subject. He then referred to malposition of the testes as a cause of impotency, but it had, he said, long been known that where the genital organs were imperfectly developed, the great probability would be that the sexual vigour would also be imperfect. He should like to have heard more evidence brought forward as to the condition of the ejaculatory tubes in cases of this kind. He (Mr. Fergusson) then went on to speak of the effect of inflammation of the ejaculatory tubes interfering with sexual power. He also alluded to the fact that sometimes, though rarely, they were injured in the operation of lithotomy, and related an instance in which a gentleman, 70 years of age, complained seriously of loss of sexual power after the operation; and another instance of the same defect in a younger patient. He said that although both testes might be affected by orchitis, generally only one was attacked, and the absence of one testis had very little to do with sexual vigour. In reference to Dr. Webster's statement, he said that he (Mr. Fergusson) knew a lady of most perfect development, who had had two children and then became a widow. She then married a widower who had also had two children by his first wife, but this second marriage was not fruitful. Mr. Curling had also omitted to ascertain the exact time when the fluid examined had been emitted.

Mr. Curling had heard that the President was in possession of some facts bearing on the points in his paper, and had applied for this information some weeks ago, in order that his communication might be rendered more complete, and he regretted to state that the President was not disposed to assist his inquiries, and did not reply to his application. He had, however, included in a table one of the cases which had been mentioned, and which had already been communicated to the Pathological Society. With regard to Dr. Webster's remarks, that sterility was more common in men than in women, he could express no opinion, for there were no data to enable him to form one. He had little to say in reply to the observations which had fallen from Mr. Fergusson and Mr. Acton. Mr. Fergusson had missed altogether the real point of the paper, which was on sterility, and not on impotency. Mr. Fergusson mentioned that we were well acquainted with the fact that persons with small, undescended testicles were impotent; but there was nothing new in that. But in the cases which he (Mr. Curling) had brought forward in his paper, the subjects of this infirmity were not impotent; they were only sterile. He had listened attentively to Mr. Fergusson's lengthened remarks, and could discover nothing which bore in any way on the paper, which had evidently not been understood by the speaker. He might almost make the same remark in reference to the observations of Mr. Acton. He quite agreed that sterility after epididymitis was not common, because to produce sterility the obstruction must exist on both sides. Mr. Acton doubted whether sexual excitement without impregnation produced any injurious influence on the health of the woman. Mr. Curling had the authority of Dr. Tyler Smith and Dr. Priestley, as well as of Dr. West, from whose work he had quoted, for saying that diseases of the ovaries and uterus originate from this cause. Mr. Curling had not laid claim to originality, but from a large experience he had been able to produce some important facts bearing upon a delicate subject, at present involved in obscurity, and respecting which it was extremely difficult to obtain reliable information.

Mr. Chas. H. Moore, F.R.C.S., gave an account of

A CASE OF STRANGULATION OF THE STOMACH IN AN UMBILICAL RUPTURE, AND OF DEATH DURING ITS REDUCTION UNDER CHLOROFORM.

A corpulent woman, aged 60, was admitted into the Middlesex Hospital, under the care of Mr. Moore, with a strangulated umbilical hernia fourteen inches in diameter. She had been operated on for strangulation ten years before by Mr. Wormald. She was greatly exhausted, having been vomiting six days and constipated three days, and having taken calomel and been leeched and blistered. She had vomited two gallons of fluid in the previous forty-eight hours. The pulse was 120. A drachm of chloroform and four successive portions of forty minims each were inhaled during eleven minutes. The taxis was employed, and was twice interrupted, once by her coughing, once by vomiting. It was continued four or five minutes after the inhalation of chloroform was discontinued, and until about one-third of the hernia had been reduced. She was then so feeble that all but restorative measures were stopped; in four minutes more she was dead. Pulse and respiration continued uniformly and failed proportionally until both ceased. The cardiac and pyloric ends of the stomach were in the abdomen; the intermediate portion was fixed and constricted in the hernial ring. The cardiac portion was flaccid and empty, but was of enormous capacity. Many parts of its mucous membrane were gangrenous and black, and some were lacerated. These lacerations bore a definite relation to the œsophageal opening. The peritoneal coat near the spleen was also ruptured, and the back of the cardiac pouch was in one spot completely perforated. About a gallon and a-half of black liquid, similar to that which had been vomited, lay in the peritoneum. This membrane was not inflamed, but the aperture through the stomach was partly black and pulpy, partly inflamed, partly infiltrated with the contents of the stomach, and a little ecchymosed.

The writer commented, 1st, on the unique character of the case—a complete strangulation of the stomach itself. None of the black fluid had passed into the small intestines, which contained air and a little yellow bile. 2nd. On the dilatation of the cardiac portion, to the inordinate distension of which he attributed the gangrene. 3rd. On the rupture of the stomach. The lacerations might have been traced to the taxis, had there been any mark of violence in the portions of the stomach within reach during that operation; but these seemed proved, by their radiated disposition with regard to the œsophagus and by the pathological changes in the principal rupture, to be due to vomiting. The perforation of the stomach might have been almost entirely produced by the vomiting, but might have been completed by the taxis. 4th. On the cause of death. The importance of the case in respect to the toxical effects of chloroform and to the supposed sudden fatality of ruptures of the stomach was considered, and reasons were offered for assigning the result to neither separately, but to both, in common with the previous and great exhaustion of the patient. Finally, it was suggested that the stomach-pump might have relieved such a case with less danger than was involved in the use of chloroform and the taxis, though actual recovery was in the highest degree unlikely.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, May 6, 1863.

Dr. Oldham, President, in the Chair.

The following gentlemen were elected Fellows of the Society:—Bruce Barclay, M.D., Shanghai; John W. Coward, Esq., Coroner, Christchurch, Canterbury, New Zealand; Henry S. Johnson, M.D., Stoke-on-Trent. Elected at the April meeting:—J. B., Brierley, Esq., Staleybridge; Edward Parsons, M.B. Lond., Samaritan Hospital; Dr. T. M. Sumter, South Audley-street.

POLYPUS OF THE UTERUS.

Dr. Graily Hewitt exhibited a fibrous polypus, the size of an egg, which he had lately removed. The case was that of a patient of Dr. Browne, of Kew, married, and forty-three years of age. The symptoms had lasted for two years, but only lately advice had been sought. The patient had become excessively weak, and reduced to a condition externally simulating that witnessed in cases of cancer. The growth, hanging just outside the os uteri, was removed by a pair of curved scissors; the pedicle was three-quarters of an inch thick. The recovery was complete.

In answer to a question from Dr. Hicks, Dr. Graily Hewitt stated that he had intended to cut the pedicle across by wire, but the pedicle was too thick to admit of this. There was no hæmorrhage from the operation.

Dr. Charles Kidd read a short memoir, entitled

"FURTHER OBSERVATIONS ON USE OF ANÆSTHETICS IN MIDWIFERY."

The administration of chloroform in various kinds of labour has been followed by the very best results; the feeling of hope of relief of pain to the mother continues to be most beneficial, the increasing number of living children now saved, where craniotomy previously was practised, is most encouraging for the future. The present communication is a sequel to a former one in the *Transactions* of the Society, and the author said it was satisfactory to find that all the leading details of that memoir had been highly appreciated, and since then very fully recognised as to their truth by the chief practical obstetricians of Germany, France, America, Australia, etc., more particularly as to the extreme value of chloroform in cases of malpresentation, or contracted outlet of the pelvis requiring versional delivery; as also in some bad forms of anæmic and epileptic puerperal convulsions, chloroform in tedious exhausting labours after dilatation of the os in women of a "particular age" who marry late in life, etc., etc. The present communication in particular had reference—1. To cases attended with hæmorrhage, where the author wished to suggest caution in the administration, as also to obtain the opinion of the Society if hæmorrhage be encouraged by chloroform. 2. To direct attention to the serviceableness of chloroform in cases of retained placenta. 3. To the usefulness of alternating the administration of ether with that of chloroform where the pulse sinks, as in some exhausting operations, such as ovariotomy. 4. To the vast advantage of using chloroform in puerperal convulsions. 5. To direct attention to the greater safety of chloroform at present, as we now know the accidents do not occur so much or at all from heart disease as from simple apnœa, as the result of stoppage of the respiratory muscles, like the relaxation or paralysis of other muscles, and to direct the Profession to the extreme value of the "Faradisation" current to these muscles in such accidents, when other means fail to restore the patient. And, first, as to the tendency of chloroform to superinduce hæmorrhage in ordinary cases, the author seemed to think the fear of this was not entirely without foundation; it is, perhaps, the only one vulnerable point in the administration, yet the latter can be stopped if hæmorrhage is feared or the hæmorrhage combated by ergot, stimulents, the use of cold, the "binder," pressure, etc., but according as bleeding continues, it is to be remembered the absorption or endosmosis of the chloroform is slightly increased, if it be still gone on with; though, on the whole, the author is not so much afraid of this condition with chloroform as one of brain congestion, or a state observed occasionally—viz., almost of delirium tremens—in some Hospital patients, or a state leading to the actual effusion in the brain in the worst form of puerperal convulsions; but this latter disease may occur without chloroform at all, and we must not blame chloroform. The author desired it to be known that he now took the most unfavourable as well as the more favourable side of the question, and as a "set off" to the doubtful question of danger of hæmorrhage, he was certain that chloroform removed unnecessary and often exhausting pain (for pain, *per se*, is always an evil), it renders "versional" delivery very much more easy, it also undoubtedly facilitates the recovery of the lying-in patient; it lessens pain, which pain often leads to puerperal convulsions. It is not probable at all that chloroform skilfully used ever stops a labour or causes inertia. Dr. Tyler Smith saw one case—we see this stoppage, and inertia, and even many cases of death from syncope during, or immediately after labour, where chloroform was never thought of at all; nor does it cause inflammation. We must not argue from coincidences, or false statistics, or what the author terms it, the always venerable error in Medical logic of arguing from a "post hoc" to a "propter hoc;" it is a great charity to give the woman in childbirth chloroform; but it too often happens that statistics, old routine, and shallow incongruities, as in other kinds of Medical evidence, stand in the way of what is of charity or the general good of the poor patient, or the Professional character. The next division of the present paper had reference to the usefulness of chloroform in "hour-glass" contraction of the uterus, and some, if not all, cases of retained placenta. A safe and useful rule (having the approval of the large Dublin Lying-in Hospital and other institutions) is the following:—If, in efforts at manual extraction of adherent placenta, the uterus be contracted firmly or in "hour-glass" fashion, the condition of the patient fair, and yet much resistance offered to the hand—but we are anxious to avoid uterine phlebitis—the administration of chloroform facilitates the placenta removal and changes the firm uterus contraction (as in version cases). It is of course probable in many cases that there may be prostration or inertia; here ammonia must be given, and acts very well with chloroform or brandy. There is a sort of lying-in room superstition, need it be said, that nothing is right till the placenta and every bit of a placenta is taken away. No doubt retained placenta is fortunately a rare complication in cases of delivery, yet in some 6000 deliveries, 56 of bad hæmorrhage and 28 of retained placenta were noted, and one case was mentioned by the author where "portions" of a placenta were removed, and uterine phlebitis thus prevented, twelve hours after a delivery; the removal such as seemed impossible without chloroform. These cases are more common with first children than with post-primiparous births. Chloroform is at least one remedy not to be neglected when the other ordinary measures are under trial. Whether many of these cases depend on inertia, the reader will decide for himself; but a new and better school of obstetrics has arisen within the last dozen years, and since the introduction of anæsthetics, bleeding is not now the remedy for phlebitis or typhus; nor is chloroform so full of danger as supposed or shown by false statistics. The author here related his experience in the analogous depressing operation of ovariotomy, in about thirty of which cases he has assisted with the anæsthetic. He now prefers ether to chloroform, or, better still, to place the patient first fairly under the latter, and continue the anæsthesia with the former; it is not necessary to use very much of either, but if the pulse should sink, the action of sulphuric ether is very marked in restoring it. If ovariotomy could be performed without one or the other, but with a piece of ice over the linea alba, it might be better still. The chief portions of the operation—breaking down adhesions where they exist, securing the pedicle, etc.—are not very painful, and even the tension of the tumour sometimes stretches the abdominal wall to a thin membrane, devoid of feeling. Chloroform, the author again intimates, should be never given in labour cases before the os uteri has dilated to something like the size of a shilling; before that the woman will bear her "pains" with some philosophy or satisfaction, if not resignation. The narcotism of chloroform is more marked in the early than in the later portion of the labour; but it is here that chloroform "delays a labour," as occasionally complained of. It is a great mistake to begin it too soon, however, no matter what the entreaties of friends, or attendants, or the patient herself may be. Very many of the popular prejudices against chloroform in these cases arise from catching a fact by the wrong handle, as it were, or losing sight of the "Opiferque per orbem" that we boast, the relief from pain in charity that it is our duty and privilege to afford the lying-in woman. Pain, too, is a physiological evil; the sense of pain is confined to the sensorium and sensory ganglia, n which chloroform acts so specially and almost alone. The effort of the uterus to empty itself, on the contrary, is one so little related to these that labour may go on in perfect paraplegia; as in cases where the relations of the spinal and reflex system were totally cut off from the sensorium and ganglia by acephalocysts in the upper portion of the chord. Labour, again, will proceed, though the cervical vertebræ may have been fractured in animals, or in the deep apoplectic coma of eclampsia in women, or in the dead insensibility of drunkenness, all of which explains that pain is non-essential, and that we may have spontaneous uterine or reflex action very perfect indeed, though sensation of pain through the brain be removed. At any rate, the sense of pain as pain, as the woman is aware of all about her, and even of the contractions or rhythm of the uterus, as she might without pain recognise the rhythmic contractions or beat of the heart. She watches, in fact, for the "pain" as she calls it; wonders and reflects that it has lost its agony, and yet the labour progresses as well as if she was in torture; recalling one's rude recollection of the old lines—

> "Remembrance and reflection—how allied;
> What thin partitions sense and thought divide!"

Like the knights of old, and their contending opinions of the colour of opposite sides of the same shield, have been the contending opinions in journals and books as to whether chloroform is dangerous in labour, or delays labour, or leads to hæmorrhage. But this diversity is at once explained as to delay—whether the chloroform was given too soon or not; and as to danger, by a heap of errors yet copied from one standard edition of a book into others, as to heart disease and its dangers, etc. Reference was next made to "Puerperal Convulsions," and three cases mentioned of fatal puerperal convulsions brought on apparently by the excessive reflex irritability of passing the hand into the uterus to remove adherent placenta. Both affections might have been prevented by use of chloroform, but could not fail to be aggravated by the lancet, still so much esteemed in convulsions. But the day for the lancet is gone by, as for stage coaches, or salivation in syphilis. Again, such convulsions are often the result of intense, long-continued agony, which nothing can lessen so well as skilful and small doses of chloroform. It is probable, as observed by Van der Kolk, that in these and all such cases of convulsions that direct irritation of peripheral ends of nerves (notably in some forms of fits from worms, irritation of external genitals in masturbation, etc.,) is reflected directly back to the medulla oblongata (or cerebellum (?) which probably presides over the organs of involuntary life), much like the impression of molecules of a galvanic telegraph wire, though still purely vital; this direct irritation, by a sort of induction, acting on other roots of nerves lying side by side. Hence we see that passing a hand into the uterus excites convulsions in parts not apparently connected with the uterus, but all which excess of action, as well pointed out by Dr. Tyler Smith, Dr. Murphy, and others, is controlled, for a time at least, by chloroform. We see this every month in tetanus cases also, and various forms of epilepsy as now so admirably cured by Dr. Brown-Séquard by other forms of anæsthesia. In conclusion, the author directed attention to seventeen women with obstructed labour, where the mothers had had in old times previously dead children, or eviscerated children, torn away by hook or crotchet, or craniotomy, as related to the Society, but where, by means of version subsequently under chloroform, nine living children, and seven with heart pulsation (but which did not live), were gained for the overjoyed mothers, and the barbarous misery to patient and attendant of pulling the child in pieces or craniotomy saved. Cases of this kind now crowd on us from all parts of Europe, America, Australia. Such is one of the vast benefits of this still underrated and cruelly misrepresented agent, chloroform, which now, as we are aware of the exact nature of accidents, not from heart disease, as previously surmised, has come to be perfectly safe, as simple apnœa of chloroform (cardiac syncope of Snow) is due to diminished action of the respiratory muscles and general reflex system, so readily excited by electricity when ordinary means (which is not often) fail to restore the patient.

Dr. **Hall Davis** mentioned several instances in which chloroform had acted most beneficially during labour; cases of nervous agitation with rigidity of the passages of the os, vagina, and perineum, and where the chloroform had superseded the use of the forceps or other methods of mechanical delivery, in facilitating version in cross-presentations, in cases where embryotomy had been contemplated. Chloroform frequently gives a regularity and uniformity previously wanting to the labour pains. On the other hand, he had seen cases in which chloroform gave a lingering character to the labour, and he believed it sometimes left relaxation of uterine fibres and tendency to hæmorrhage. He had met with no death from the use of chloroform in midwifery practice.

Dr. **Murphy** stated that, with regard to the use of chloroform in puerperal convulsions, he had found it to be a most valuable agent in controlling the paroxysms. It has succeeded where the more usual remedies have failed. In ordinary cases of labour, where the pains are severe, he had also found it extremely beneficial. For this purpose it is not necessary to put the patient asleep; pain can be controlled, and the patient remain perfectly conscious. The first effect of chloroform is on the sentient nerves, and pain may be relieved long before insensibility takes place. Its administration in this manner he had found to give the most complete relief. In reply to questions put by the President, Dr. Murphy observed that he knew of no deaths from chloroform in the practice of midwifery. With regard to its use in true puerperal convulsions with albuminous urine, the best answer he could give was the relation of a case. He was called to attend a lady, a year or two ago, pregnant with her first child. She was of middle age. Her labour was not difficult; it lasted about eight hours; her pains were very acute. She would not take chloroform, and, being a woman of much fortitude, she struggled to command herself, but in the contest she became giddy, lost her sight, and convulsions followed. She was bled, without controlling the convulsions. Chloroform was then administered with perfect success, and the paroxysms were at once controlled. Tranquil sleep followed, and the convulsions did not return. He carefully examined the urine, and found it to be albuminous. The lady perfectly recovered.

Dr. **Rogers** could not recollect a single case of flooding produced by its use. He was careful to give ergot to patients who had previously flooded. He had been able to turn more easily, and had likewise given chloroform to its full extent in some cases of craniotomy, but as a rule he merely soothed and calmed his patients with it. A very small quantity was used at the Samaritan Hospital during the operation of ovariotomy; he did not think it added to the shock of such operation, or diminished the chances of recovery, nor could he say that ether or a mixture of ether and chloroform was preferable in such operation.

The **President** considered the questions raised in the paper of the greatest possible interest. He would like to have the experience of the Fellows present on some important points,—the effect of choroform in predisposing to hæmorrhage after labour; the results as to the use of chloroform in puerperal convulsions; and as to the occurrence of death from the employment of chloroform in Midwifery practice.

Mr. **Cumberbatch** had never known flooding induced by the use of chloroform in Midwifery, and, as far as his experience went, hæmorrhage was not more likely to occur than if it had never been given. No fatal case had come under his notice in which the result could be ascribed to chloroform.

Dr. **Routh**'s opinion was decidedly adverse to that generally given by previous speakers. He believed that chloroform when given to any extent developed a tendency to imperfect contraction after the removal of placenta, and thus favoured the occurrence of hæmorrhage. Since he had used chloroform he certainly had a larger proportion of cases of hæmorrhage. He was also certain from experiment that it materially lessened uterine contractions during the first stage, and illustrated this opinion by a well-marked instance. In the second stage, except when carried to the absolute unconsciousness of the patient, it did not influence the uterine contractions. But, if given largely, as every Accoucheur would acknowledge who had turned with chloroform, and without it, it certainly diminished the force of the contractions. He had heard of one case of death after chloroform in labour. It was that where a Practitioner delivered by forceps, a well experienced nurse giving the chloroform while he was using them. As the child was extracted, the woman fell back suddenly and died. The suddenness of the death especially appeared to him to prove the fatal issue was due to chloroform.

Mr. **Chapman** was desirous of eliciting the opinion of the Society as to the propriety of using chloroform in puerperal convulsions, and as to what rules should be laid down for its administration under such circumstances.

Dr. **Graily Hewitt** observed that no rule universally applicable could possibly be laid down as to the use of chloroform in puerperal convulsions. In some cases—a marked instance of which he related—the condition present was caused by very extensive disease of the kidneys. In such cases, chloroform was perfectly useless. In other cases, when the blood-poisoning and the albuminuria were only temporary, and not so dependent on organic disease, chloroform had proved to be very serviceable.

Dr. Martyn had employed chloroform in painful and difficult labours for many years of practice, and he had met with no seriously unfavourable results from it, but otherwise. Sometimes troublesome sickness appeared to follow, as in other cases, and he has observed some check to pains, but whether this effect is confined to the first stage of labour, he was not able to say. He had never met with a serious hæmorrhage after the use of chloroform. Indeed, he decidedly believed that it rather saves the patient in this respect. As to its application in severe cases of convulsions in labour, he was most anxious for the opinion of the author and of those who have had experience in such cases. In one case in his own practice which terminated fatally, a considerable amount of blood was lost naturally without any effect in abating symptoms. A young woman, primipara, very anasarcous before labour, was attacked with convulsions towards the close of it. No case could be better marked. The child's head being low down, she was delivered by forceps at once. Considerable hæmorrhage then ensued, and the patient soon fell into a state of coma and died, the convulsions and other symptoms not being at all relieved. In watching the record of many cases of puerperal convulsions, he had observed that large bleeding, shaving the head, and the use of ice had seldom been followed by satisfactory results. He himself would rather trust to chloroform than any other known remedy. In many of the minor operations of midwifery, in hour-glass contraction, for the removal of the placenta, etc., etc., excepting to relieve pain, he did not consider chloroform to be required.

Dr. Cleveland suggested that in cases of convulsions associated with albuminuria, the specific gravity of the urine, when practicable, should be ascertained, inasmuch as the presence of albumen in that fluid, *per se*, did not necessarily indicate blood-poisoning; but when it co-existed with a low specific gravity there was evidence, in addition to the general symptoms, of the retention of those salts in the blood, which, in a healthy state, are eliminated by the kidneys. Under the latter circumstances he thought that the administration of chloroform was more likely to be injurious than otherwise.

Dr. Braxton Hicks, in reply to Mr. Chapman, said he had used chloroform in puerperal convulsions to produce quietude during instrumental delivery, and found it to succeed very well, and without untoward result. In reply to the suggestion thrown out by Dr. Cleveland, Dr. Hicks said that he had continually examined the urine of patients with puerperal convulsions, and had found it always albuminous at some time, during the attack or after. It may be present only for a short time, and might be missed if not carefully watched for. The specific gravity was always high, generally with blood corpuscles, waxy and epithelium casts, in fact the evidence of acute "Bright's disease." Whether the addition of chloroform to this state was safe, or whether it would add to the blood-poisoning, was not yet determined.

Dr. Druitt said it was difficult to apportion the amount of danger to be ascribed to the chloroform, or the amount of good in eclampsia. The cases must be judged by a fair analogy with others. He cited an instance of a lady dying in childbirth—so-called—but in reality of scarlet fever superadded. He did not find that hæmorrhage was induced by administration of chloroform, and he agreed with the author generally.

Dr. Braxton Hicks wished to know if chloroform and ergot could be combined, and what would be their action in "irregular" labours.

Dr. Kidd, in reply, had found chloroform and ergot go very well together, especially if used, as it were, alternately,—the effect of one allowed to wear off a little before using the other. In conclusion, he expressed his satisfaction that the experience of the Society was in favour of chloroform even in hæmorrhage cases, and so in cases of retained placenta. As to eclampsia, he believes there are three forms of this disease, and in two chloroform is a certain remedy rather than the lancet. Even albuminuria is due to pressure of the gravid uterus on the kidneys, not actual disease. He agreed with Dr. Murphy on this point, but not perhaps so well as to the same speaker's view that the muscular fibres of the uterus are not relaxed by large doses of chloroform. He had, however, great respect for Dr. Murphy's opinions, and would say, as corroborating them, that the muscular fibres of the heart, so like the uterus, are not acted on by chloroform as popularly believed. As to convulsions, he would say that all the best men in Europe and America—Simpson, Churchill, Meigs, McClintock—approved highly of chloroform in a large majority of cases. The explanation of these convulsions by Van der Kolk in the paper is the true one; but if there were superadded apoplectic effusion, which occurs in only 20 per cent. of the cases, then perhaps nothing would be of use, and chloroform would do neither harm nor good, and the lancet positive harm. With reference to ether, Dr. Kidd prefers it in tedious exhausting operations like ovariotomy. A mistake sometimes is made to use six or eight ounces of chloroform in such an operation, but six or eight drachms might answer, as the operation, though attended with vast depressing "shock" to the nervous system, is not very painful after the first section of the skin over the linea alba. He has known cases, too, where there was great exhaustion saved by beef-tea and wine injections, especially if sickness from chloroform prevented food being taken. Very good absorption, especially in children, goes on from injections. Chloroform does not lead to inflammation, as supposed by some, as in some absurd statistics, because, in an Hospital, of those not chloroformed 1 per cent. die only; but of those under chloroform a larger number have the operation of forceps or craniotomy. The latter fact is ingeniously omitted.

MEDICAL NEWS.

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Royal College of Physicians of London.—At a general meeting of the Fellows, held on Thursday, June 25, 1863, the following gentlemen, having undergone the necessary examination, were duly admitted Members of the College:—

William Woods Johnston, M.D. Edin. (of Java), 21, Clifton-gardens Maida-hill; Wm. Smoult Playfair, M.D. Edin., 8, Princes-street Hanover-square; William Stewart Falls, M.D. St. Andrews, Bournemouth; Edwin Edmund Day, 42, Curzon-street, May-fair; John Robinson Dickson, M.D. New York, Kingston, Canada West; and Edward A. H. Head, M.B. Lond., 44, Harley-street.

At this meeting, the following officers of the College were elected for the ensuing year:—*Censors*—George Owen Rees, M.D., Edmund Lloyd Birkett, M.D., Charles West, M.D., Charles Handfield Jones, M.B. *Treasurer*—James Alderson, M.D. *Registrar*—Henry Alfred Pitman, M.D. *Examiners* (*a. On the Subjects of General Education*)—John Spurgin, M.D., Wm. Augustus Guy, M.B., Robert Gordon Latham, M.D.; (*b. On the subjects of Professional Education*)—*Anatomy and Physiology*—Francis Sibson, M.D., William Senhouse Kirkes, M.D.; *Materia Medica, Chemistry, etc.*—Alfred Baring Garrod, M.D., William Odling, M.B.; *Principles and Practice of Medicine*—William Emanuel Page, M.D., James Risdon Bennett, M.D.; *Principles and Practice of Surgery*—John Eric Erichsen, Esq., F.R.C.S.; Frederick Le Gros Clark, Esq., F.R.C.S.; *Midwifery and the Diseases peculiar to Women*—Arthur Farre, M.D., Henry Oldham, M.D. *Librarian*—William Munk, M.D. *Curators of the Museum*—James Alderson, M.D., Patrick Black, M.D., Wm. Wegg, M.D., Francis Sibson, M.D.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, June 25, 1863:—

Thomas Moore, Wilmslow, near Manchester; Albert George Cox, Crewkerne, Somerset; James Butler, Great Bridge, near Birmingham; Richard Thomas, Carn Meylltyne.

The following gentlemen also on the same day passed their First Examination:—

William Burt Shorto, Charing-cross Hospital; George Grewcock, University College Hospital; William V. Snow, University College Hospital.

Royal College of Surgeons.—At a special meeting of the Court of Examiners on the 25th ultimo, Mr. John Robinson Dickson, M.D., of Kingston, Canada West, having undergone the necessary examinations, was admitted a member of the College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Armstrong, Leonard, M.R.C.S. Eng., has been appointed Surgeon to the Convalescent Hospital at Marsden, near South Shields.

Brougham, J. P., M.D., has been appointed Hon. Magistrate of Calcutta.

Cheevers, N., M.D., has been appointed Hon. Magistrate of Calcutta.

Lawson, George, F.R.C.S. Eng., has been appointed Surgeon to the Middlesex Hospital.

Leishman, William, M.D. Glasg., has been appointed Professor of Medical Jurisprudence in Anderson's University, Glasgow.

McDiarmid, J. D., M.D., has been appointed Assistant-Surgeon to the Convict Establishment at Chatham.

McDougall, J., M.D., has been appointed House-Surgeon to the Greenock Hospital and Infirmary.

Philipson, George H., B.A., M.B., has been appointed Physician to the Convalescent Hospital at Marsden, near South Shields.

Wesley, J. S., M.R.C.S. Eng., has been elected Resident Medical Officer to the St. Pancras and Northern Dispensary.

DEATHS.

Bird, G. Gwynne, L.R.C.P. Lond., at Bowmanville, Upper Canada, on May 25, aged 83, formerly of Crickhowell.

Buchanan, Robert Hamilton, late of the H.E.I.C.S., Madras, at 3, Hereford-road South, Bayswater, on June 25, aged 60.

Dudden, James Charles, at Thame, Oxfordshire, on June 17.

Gaulter, Thomas C., M.D., at Allevard, Grenoble, on June 23, Deputy-Inspector-General of Hospitals.

Gray, James Foster, F.R.C.S. Eng., at Northampton, on June 27, aged 31.

Jones, John, M.R.C.S. Eng., at Friar Gate, Derby, on June 23, aged 75.

Kemp, Charles Godfrey, M.R.C.S. Eng., at Kirbymuxloe, Leicestershire, on June 25, aged 33.

Mackley, Thos., L.S.A., at Wilsden, Bingley, Yorks, on June 14, aged 63.

Mr. Robert S. Mair, L.R.C.S.E., Deputy-Coroner of Madras, was, on June 24, elected a Fellow of the Royal College of Surgeons, Edinburgh.

Royal College of Surgeons in Ireland.—Dr. James Stannus Hughes has been elected Professor of Surgery, in the room of the late Dr. Power.

Death of Sir Joshua Jebb.—We are sorry to notice the death of this distinguished public servant. He died suddenly from apoplexy, with which he was seized when riding outside an omnibus on the way to his offices. He was a general in the army, and had served with distinction in Canada and the West Indies. As the author of the ticket-of-leave system, and an authority on the treatment of convicts and on prison discipline, he occupied a most prominent position in social science. As a public man he was large-hearted, benevolent, and able, and his measures, even when faulty, "leant to virtue's side."

Malicious Administration of a Noxious Thing.—A woman named Wilton has been charged at the Lambeth Police Office with administering to a coachman who lived next door to her a pie composed of gamboge and black beetles. Dr. Odling analysed the pie, and found 30 grains of gamboge in about a quarter of it. The whole therefore probably contained 120 grains, a quantity which, if taken, would be fatal to life.

Raphides.—It would appear from Professor Gulliver's observations that these beautiful objects are likely to prove available as diagnostic characters in systematic botany. And sure we are that the examination of raphides might prove an elegant and instructive amusement to many country Practitioners. The following conclusions seem to be already established:—1. Raphides form a regular part of the healthy, growing, or perfect structure of several plants — from the ovary to mature parts, as stem, leaves, sepals, and testa,—contrary to the statement of Schleiden that "crystals are rarely met with in cells in a full state of vitality." 2. Crystals resulting merely from chemical changes connected with decay in the stem, bark, and other parts belong to a different category. 3. Numerous species and orders of plants are nearly or quite devoid of raphides as a regular part of the growing and healthy structure. 4. Certain orders may be so readily distinguished from their near allies by raphides alone, and this even in minute fragments of the leaf and other healthy parts, whether in the fresh or dried state, in the absence, too, of the flower and fruit, that the fact should henceforth be comprised in the descriptive characters of our plants of those orders. 5. Onagraceæ and Lemnaceæ have now been proved, as far as regards the British plants, to be such orders. 6. The common and abundant willow-herbs and duckweed, being thus very laboratories for the formation and collection of phosphate of lime, should be worthy of attention as valuable manure.—*Ann. Nat. Hist.*

Non-burial of Bodies at Stoke Newington.—The Sanitary Inspector of Stoke Newington has discovered on the premises of an undertaker named Chapman four coffins, containing the remains of as many children. One of the children is supposed to have been dead about nine months, and was little more than a skeleton. Another appeared to have been dead only two or three weeks; and the others were in such a state, apparently from the action of lime, that it was difficult to tell how long they had been dead. The coffin of an adult, which was found with the lid screwed down, attracted attention; and Mr. Chapman, on being interrogated, stated that it contained the body of a pauper, who had died six weeks ago, and he was only waiting to bury it with a number of others. He at first, it is said, refused to have it opened, but the inspector insisted on its being done, and the coffin was found to be empty. There is no explanation at present forthcoming as to what has become of the body.

University of Dublin School of Medicine.—At the recent examinations for Medical Scholarships in the University School of Medicine, held on the 17th and 19th ult., Mr. Thomas Evelyn Little, A.B., Science Scholar, and Mathematical Gold Medallist (1861), obtained First Medical Scholarship on the following unusually high answering:—Little, 82 per cent.; Gray, 70 per cent.; B. M'Dowell, 67 per cent.; Ward, 59 per cent.; Cooper, 57 per cent. In consequence of Mr. Gray not being a Student in Arts of the University, and of Mr. M'Dowell being of only Junior Freshman standing, the Second Medical Scholarship fell to Mr. Montgomery Albert Ward, as next in order of merit.

King's College, London.—Medical Department.—June 26, 1863.—The Bishop of Lichfield in the Chair.—*Scholarships.*—Edward Harley, Senior Scholar; Charles Berrell, 2nd Year Scholar. Robert Shingleton Smith, Charles Kelly, and Edward Charles Evans, Junior Scholars. Edward Harley, William Lemale Canton (since deceased), Charles Kelly, Samuel Hignett Smith, Robert Shingleton Smith, Frederick Marshall and Charles H. B. B. Allen (Æq.), Warneford Scholars. *Prizes and Certificates of Honour.—Winter Session*, 1862-63.—Warneford Prizes: Edward Liveing Fenn, 1st Prize; Charles Berrell, 2nd Prize. Leathes Prizes: William T. T. Dyer, 1st Prize; Alfred John Matthew, 2nd Prize. Divinity Prizes: John Spencer Ferris, 3rd Year; Richard Wheeler Haines, 2nd Year; Charles Kelly, 1st Year. Gill Prize: John Oakley. Todd Clinical Prize: Henry Law Kempthorne. Anatomy: Thomas Clay Shaw, B.A., and Miles Astman Wood, (Æq.,) Prizes. Physiology: Walter T. P. Wolston, Prize. Chemistry: Charles William Philpot, Prize. Medicine: Henry Law Kempthorne, Prize. Surgery: Herbert Nankivell, Prize. Clinical Medicine: Joseph Groves, B.A., Prize. Clinical Surgery: Herbert Nankivell, Prize. *Summer Session*, 1862.—Practical Chemistry: Charles Berrell, Prize. Forensic Medicine: John Spencer Ferris, Prize. Botany: William Turner T. Dyer, Prize. Midwifery: Robert Meadows, Prize. Materia Medica: Thomas Clay Shaw, B.A., Prize. Comparative Anatomy: Revett Coleridge Powles, Prize. Clinical Medicine: William Clinton Smith, Prize. Clinical Surgery: John Sebastian Wesley, Prize. *Names of those elected Associates of King's College, London.*—John Bubb, Edward Harley, John Henry Hartley, Robert Lewer, Charles Samuel Matthews, William Johnson Smith, and William Nealor Thursfield.

The Middlesex Hospital Medical College.—The distribution of prizes took place on June 29, 1863. Sir Stuart Alexander Donaldson in the chair. *Prizes and Certificates of Honour awarded to First Year's Students, Summer Session*, 1862.—*Æquales*—Mr. Henry Cribb, Bishops Stortford; Mr. Edward Norton, Birmingham. *Certificates of Honour.*—Materia Medica (Dr. H. Thompson): Mr. Henry Cribb. Botany (Dr. Spencer Cobbold): Mr. Henry Cribb. Practical Chemistry (Mr. Taylor and Mr. Heisch): Mr. Henry Cribb. *Winter Session*, 1862-63.—First Prize—Mr. Vincent Edmund Noel, Devonport. Second Prize—Mr. Charles Wills, Narborough, Leicestershire. *Certificates of Honour.*—Anatomy (Mr. Moore): Mr. Vincent Edmund Noel. Physiology (Mr. De Morgan):

Mr. Vincent Edmund Noel. Chemistry (Mr. Taylor and Mr. Heisch): Mr. Vincent Edmund Noel. *Prizes and Certificates of Honour awarded to Second Year's Students, Summer Session*, 1862.—First Prize—Mr. John Ablewhite Smith, Louth. Second Prize—Mr. Alfred Brend, Bideford, Devon. *Certificates of Honour.*—Midwifery (Dr. Priestley): Mr. John Ablewhite Smith. Medical Jurisprudence (Dr. Greenhow and Mr. Henry): Mr. John Ablewhite Smith. *Winter Session* 1862-63.—First Prize—Mr. George Clements, Brixham, Torbay. Second Prize (which for the fulness of his clinical reports has been made equal to the first prize)—Mr. Henry William Freeman, Bideford, Devon. *Certificates of Honour.*—Medicine (Dr. Stewart and Dr. Goodfellow): Mr. Robert King. Surgery (Mr. Shaw): Mr. George Clements. Anatomy (Mr. Moore): Mr. George Clements. Physiology (Mr. De Morgan): Mr. George Clements. Pathology (Dr. Murchison and Mr. Sibley): Mr. George Clements. *Prize offered by the Medical Society for the Best Paper of the Session.* (In consequence of the excellence of two of the papers, a prize has been awarded to the author of each.)—Mr. George Pyle, Amesbury; Mr. James Smith Turner, London. *Prizes awarded to Third Year's Students.*—Clayton Prize for Comparative Anatomy: Mr. S. Seabury Edwardes, Hampstead. Governor's Prize for the Best Report in Clinical Medicine and Clinical Surgery: Mr. John Ablewhite Smith.

HOMO ANTIQUISSIMUS.—The speculations which Sir Charles Lyell indulged in respecting the future discovery of human remains in beds containing *Elephas meridionalis* are now justified by a new discovery. M. Desnoyers has recently communicated to the Paris Academy of Sciences a memoir describing some beds of sand and gravel underlying drift at Saint Prest, in which he states that certain bones of *Elephas meridionalis*, *Rhinoceros tichorhinus*, *Hippopotamus major*, and deer found in this locality exhibited transverse *striæ*, which he interprets to be evidences of cuts made by human agency, and differing entirely from the scratches produced by the erosive action of ice or flints so common in drift remains. Like evidences from drift deposits were, it may be recollected, described by M. Lartêt, and exhibited by Mr. Leonard Horner at the Geological Society a few sessions ago, when no doubt was expressed of their genuineness. On the other hand, it must be remembered that at the Cambridge meeting of the British Association last year an estimable geologist was led into the error of producing a so-called "whittled bone" of elephant, the cuts on which he presumed to be ancient, but which were in reality of the most recent character. Some gentlemen in London have long been engaged in the investigation of the appearances which are produced by various implements of steel, iron, bronze, "Abbeville flint" on recent and on fossil bone, and no doubt they will have something to say on M. Desnoyer's discovery. The passage in Sir Charles Lyell's work on the subject, now, however, becomes of greater interest. He said a few months ago—"If any such [bones or stone weapons of the date of *Elephas meridionalis*] lie hid in those strata, and should hereafter be revealed to us, they would carry back the antiquity of man to a distance of time probably more than twice as great as that which separates our era from that of the most ancient of the tool-bearing gravels yet discovered in Picardy or elsewhere. But even then the reader will perceive that the age of man, though pre-glacial, would be so modern in the great geological calendar, . . . that he would scarcely date so far back as the commencement of the post pliocene period." We shall keep our readers duly informed of the further details of this alleged discovery.

ANOTHER DEATH FROM DISINFECTING FLUID.—On Monday an inquest was held at Croydon, before Mr. Carter, coroner for East Surrey, touching the death of Emily Evans, seventeen years of age, the daughter of Mr. J. Evans, fishmonger, of Meadow-stile, Croydon, who died on Friday evening last from the effects of Sir William Burnett's Patent Disinfecting Fluid," which was given to her at her own request by her little brother, aged seven years. It appeared from the evidence of the deceased's father that she came home about three weeks ago, and on Friday week was taken with the small-pox, and confined to her bed, being attended by Mr. J. J. Johnson, Surgeon, Croydon. About five o'clock on Friday evening last, Mr. Evans was attracted to the deceased's bedroom by screams, and, on proceeding upstairs, saw her vomiting. He said, "Good gracious, what is the matter?" Deceased replied, "Oh! father, I have drunk a glass of the stuff from that bottle," pointing to the mantelpiece, where the bottle which contained the disinfecting fluid stood. He asked, "How did you come by it?" She answered, "I asked my brother Charles (who was present in the bedroom) to pour me out some, and I took half a glassful." There was no other bottle on the shelf, her own medicine being placed by her bedside on a chair within her reach. It was believed by the father that the deceased knew the fluid was of a poisonous nature, because when it was procured she remarked to her mother, "Is this stuff similar to that which I heard you reading of in the paper, that a servant gave to a lady, who died from it?" The Medical testimony went to show that Mr. Johnson, a doctor who had been sent for, found her dead; frothy mucus was coming from the mouth; the legs were drawn up in a cramped position; the hands were natural, but the eyes were dilated. He smelt and tasted the fluid, and found it contained chloride of zinc. He understood the symptoms the deceased laboured under after drinking that fluid, which he knew, from reported cases in Taylor's work, was a corrosive irritant poison. The quantity taken by the deceased had been known to destroy life, and in this case he was of opinion that death resulted from drinking that poison.—The Coroner having explained the legal points of the case, the jury viewed the body, and afterwards returned a verdict that the deceased's death was the result of accident, at the same time adding they were of opinion that a fluid of so dangerous a nature to human life as "Burnett's Patent Disinfecting Fluid" ought not to be sold without proper precaution being taken to show that it was poisonous. The Coroner said he would write to the firm, and inclose them a copy of the verdict.

POWDERING ALOES AND MYRRH.—Aloes is easily reduced to powder in winter, but in summer it becomes agglomerated so as sometimes to form one solid mass. According to M. Wollweber, this inconvenience may be obviated if we submit the aloes to a preliminary artificial drying until it becomes spontaneously reduced into powder. The same procedure applies to myrrh powder.—*Bull. de Thérapeutique*, vol. lxiii., p. 359.

BOOKS RECEIVED.

Seventeenth Report of the Commissioners in Lunacy to the Lord Chancellor. 1863.

Bulletin de l'Académie Royale de Médecine de Belgique. Tome 6. Nos. 1 and 2. Bruxelles: De Mortier, Fils. 1863.

The State of the Medical Profession further Exemplified. By Edwin Lee, M.D. London: W J. Johnson. 1863. Pp. 87.

*** The writer of this bulky pamphlet, after some difficulty in finding a publisher, favours the world with his gloomy views on the state of Medicine. From the total failure of the recent Medical Act he curiously infers the need of further Government interference. His resentment falls heaviest on the late Sir B. Brodie and other members of St. George's Hospital Staff. The flattering testimonials in his own favour, and highly complimentary notices of his own previous publications which he appends, lead to the conclusion that while he is a member of our degraded Profession, there is still some slight hope for it, at least, in his opinion.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Argus asks whether it is physically possible for any man to use the speculum 100 times in one day; and, if possible, what information would be derived from such glimpses at the os uteri.

Dr. Kidd was requested by us, some time ago, to explain the plan of treatment adopted under certain circumstances. He was good enough to reply; but his letter, in our judgment, did not contain the information asked for, and did contain a quantity of irrelevant matter, and was, we thought, not suited to our pages. Dr. Kidd will accept our assurance that no personal disrespect was intended; but that every Editor must determine on behalf of the readers and proprietors what communications are fit for insertion and what are not.

The Harveian Oration.—The College of Physicians must look to their laurels. One of our contemporaries thus speaks of the oration delivered by Dr. Page, *vice* Dr Sutherland:—"The oration was very short, and it has struck us on many similar occasions of late that the Latinity of the orations is not of that elegant and refined character which once distinguished the discourses delivered in the College. There are indeed no gross or obvious mistakes in quantity or grammar; but the niceties of Latinity, especially in the use of the tenses and of the subjective (query subjunctive) mood are not observed."

Death from Overwork.—There is no evidence that the death of the poor milliner's girl, Walkley, at 170, Regent-street, was caused by overwork or by want of air. Before deciding on the cause of her death, the result of the *post-mortem* examination should be considered, and the nature of the medicine which the poor girl took. The question of the health of milliners' girls rests entirely with the women in high life who employ the milliners. If ladies were to pay a fair price, in ready money, and to deny their custom to any house where the young workwomen were not well treated, the question would be at an end. But so long as ladies order extravagant dresses, for which they never pay ready money, but claim a long credit, so long will the milliners have an excuse for overwork, and for want of decent accommodation for their young women.

Russell v. *Adams.*—The following important letter has been circulated, which is certainly the most complete vindication of Mr. Adams. Why was it not forthcoming at the trial?

"9, Trinity College, Dublin, May 12.

"Sir,—As the executor of the late Rev. Edward Kent, the brother of Mrs. Russell who has given you so much annoyance, I deem it my duty to communicate to you my opinion and that of her family respecting her conduct.

"The first knowledge I had of the action against you, was the trial reported in the Irish papers. Had I known that such an event was to take place, I should gladly have volunteered my evidence against her unjustifiable attempt. But I believe that even now a letter from me may be of some use to you in dispelling the doubts, if any exist, respecting your conduct towards her daughter.

"It seems then from her own evidence that she boasted of her connections, but she forgot to state that she had been for years discountenanced and disavowed by them.

"I am nearly sixteen years married to her niece, and I never spoke a word with her, and she never was in my house. Her brother, the Rev. Edward Kent, died in London on the 8th of January, before the trial took place, and yet she knew nothing of it, although he was dying for more than a year. This must prove at all events that she was kept at a distance by us.

"I have had a good deal of correspondence, rather from her than with her, for I acted as her brother's agent in paying her a small annuity, on condition that she should not correspond directly or indirectly with him, who was of a rather excitable temperament; and on several occasions I had to stop her monthly allowance when she acted contrary to his wishes in this respect.

"I have consulted the family, and they request me in their name to express to you the indignation they feel at Mrs. Russell's conduct, their sympathy with you and your family for the trouble in which your benevolence has involved you, and the assurance that they completely disbelieve the accusations brought by her against your moral character.

"I am, Sir, your faithful servant,
"J. G. Abeltshauser,
"Professor University of Dublin; Rector of Derryloosary, County of Wicklow; Chaplain to His Excellency the Lord Lieutenant of Ireland.

"W. Adams, Esq., London.

"P.S.—Any information I can give that may be useful to you is at your service."

Petroleum Conflagration at Oil City, Penn., U.S.—The blazing boats floated down with the force of the current, and several were grounded at the head of the island, at the foot of the eddy. These boats formed a bridge of fire, reaching from about the middle of the river to the opposite side. No other substance that we know of forms so dense a smoke as petroleum. Vast clouds of this went up from the burning boats. These were edged with a colour resembling burnished gold and silver. Although the night was dark, a distance of several miles around was lighted from this fire, so that objects could be plainly seen. In our town one could almost see to pick up a pin on the streets; and a gentleman when travelling, twenty miles from this place, heard the shock, and saw the light, which was sufficient to guide him on his way through a dense wood. Some twelve or fourteen boats formed this bridge of intense flame. The flames from these bulk and barrel boats would leap into the air to a distance of fifty feet, and then become merged in the dense volumes of smoke above. After emerging above this the whole arc of the heavens were illuminated by the solar rays of the pure carbon flame. After the first shock no more explosions occurred. The crackling of the fire, the general appearance of the whole scene, formed the best conception of a *feu d'enfer*, or fire of hell, that a frightened sinner could imagine. So it is useless, in fact, to give an adequate description. Language and human comprehension were alike powerless. We stood, as it were, entranced and amazed at the terrible grandeur of the scene. The flames, like a hungry monster, licked up the oleaginous mass, which burned furiously, and emitted an intense heat. Fort Sumter, with such a mass of fire against it, would have surrendered in five minutes. . . From the best information we can get, the boats burned all the way to Franklin, a distance of seven miles. On Wednesday morning, Franklin bridge took fire from a burning boat, and was totally consumed. It appears that the boat was moored safely to shore, but some one cut it loose. It floated upon the abutment, on the other side of the river. The flames went through the bridge like a flash, and in three minutes the bridge was on fire from one end to the other. All efforts were made by the citizens of Franklin to save it, but human efforts were powerless against this terrible foe. . . . As to how the fire originated, there is a diversity of opinion which we will endeavour to settle. A watchman employed on one of the boats saw a lantern which some of the boatmen had left on the edge of their boat, which was next to an open bulk boat. In his hurry to secure it, he stumbled over an oar, and the blazing lantern fell into the open boat of oil. An instantaneous explosion and ignition was the result.—*Oil Springs Chronicle*, May 28, 1863.

Poisoning at Berlin.—A remarkable trial for murder by poison has just been held in Berlin. The accused were the widow Knothe, aged 47, and a working mason, named Steinmann, 27 years old; the victim was Knothe's husband, a colour-maker, in comfortable circumstances. The poisoning had been carried on a long time before death ensued. The death of Knothe took place in November last year, and although the symptoms, as described upon the trial, seem to have been of a suspicious nature, the doctor in attendance suspected nothing, was misled by the wife, who described her husband as having been addicted to the abuse of ardent spirits, and gave an ordinary certificate of death. Two days later, an anonymous letter which he received, and at once handed to the police, led to an examination of the body, in which a quantity of arsenic was found. When arrested, the accused at first denied their guilt, but, it having been proved that shortly before her husband's death the woman had bought a pound of arsenic, Steinmann made a confession, which she afterwards in all essential points confirmed. It appeared that they had tried various kinds of poison, and that the attempts were for a long time unsuccessful. "If I had but hemlock or nightshade!" the woman often exclaimed. Not having them, she tried aquafortis for about three weeks, in such doses as she could venture to give, mixed in her husband's drink, but she succeeded only in making him ill. She then thought of quicksilver, and scraped it off a looking-glass, mixing it with sour kraut. As this did not suffice, she took Steinmann with her to Frederick's-heath, in the neighbourhood of Berlin, to pluck hemlock, which she next day put in her husband's soup. Nightshade was sought for, but could not be found, and at last she thought of arsenic, which finally proved effectual.—*Times Correspondent.*

Skin Hospital Pharmacy.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your excellent article on "Hospital Pharmacy" of a few weeks back you make some judicious comments on the inconveniences of special formulæ. A case recently under my notice leads me to add another to this category. Remedies so powerful as to be dangerous, disguised under a cabalistic title, are liable to be handed over to patients without due warning and precaution.

A gentleman, suffering from slight ecthyma, attended at the Hospital for Diseases of the Skin. There he received the following prescription, which is now before me:—

℞ Mist. Hy. Co. ℥vj.
ʒj. —— ter.
Ungt. S. C. ℥ss.

In rather less than a week, when not twenty out of the forty-eight doses had been taken, he sent hurriedly for me, and I found him with distinct symptoms of irritant poisoning, rejecting even cold water from the stomach, his skin peeling off, and conjunctiva cherry red. The medicine tasted strongly of corrosive sublimate; on referring to the special Pharmacopœia, I found each dose to contain one-twelfth of a grain of bichloride of mercury, and three minims of Fowler's arsenical solution.

These doses are certainly not excessive, but the result of the case plainly shows that more care should be used in their administration. He was requested to return in a fortnight, though his medicine obviously would last sixteen days.

He had not the smallest idea that he was taking either mercury or arsenic, and soon improved on leaving off these drugs. It is only quite lately that he has recovered from the severe illness thus brought about.

I am, &c.

13, Vigo-street. William H. Stone.

Dr. George Johnson's Reply to Dr. Morell Mackenzie.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having neither time nor taste for controversy, I must nevertheless make a brief reply to Dr. Morell Mackenzie's criticism of my paper on the "Use of the Laryngoscope." Dr. Mackenzie maintains that while I have claimed undue honour for Garcia, I have given less than is due to Czermak. Now it appears to me, as I think it must to every one who is acquainted with the history of laryngoscopy, that Garcia's claims are so entirely distinct from those of Czermak, that there can be no rivalry between them. What I have written of Garcia's share in the creative work of laryngoscopy is strictly true. My remarks on Czermak's claims to recognition and honour would perhaps have been more full and explicit if I had not written under a conviction that they are so well known and so universally recognised, that it was superfluous to insist upon them. Every one who has heard me speak of my friend Dr. Czermak will at once assent to my declaration that nothing could have been further from my intention than to depreciate his successful labours in the field of laryngoscopy; while I maintain that "Garcia's paper is the fountain head from which our present knowledge of laryngoscopy had its source and origin," it is implied in my remarks on Czermak's labours—remarks which Dr. Mackenzie has quoted incompletely and inaccurately—that the stream of knowledge has been largely increased by his genius and industry. The application of the concave reflector, as a means of concentrating light, would alone entitle Czermak to the lasting gratitude of mankind. To say, as Dr. Mackenzie does without justification, that Czermak "created the art of laryngoscopy," is not strictly true, although it is quite true that we are indebted to him for a vast improvement and extension of the art, and for its practical application to the investigation of disease.

I could not well have said less of Türck than that he lent Czermak his mirrors. Dr. Mackenzie is aware that as to whether Türck had "entirely given up his fruitless attempts," there has been a painful controversy. Upon this point I purposely abstained from touching.

And now a few words of reply to Dr. Mackenzie's objection, that with the reflector on the forehead there is a difficulty in getting a view of the larynx when the mouth is not wide open, or when the opening of the larynx narrows. This objection is best answered by the result of the following experiment:—I take a tube six or eight inches long, and from a quarter to an eighth of an inch in diameter. Placing the tube vertically in front of me, with the reflector on my forehead, and the laryngeal mirror held obliquely over the top of the tube, I can easily see to read small print on a piece of paper beneath the lower end of the tube. Thus, with the reflector on the forehead, I can readily and completely illuminate a tube much longer and narrower than any larynx can possibly be. I maintain that there are no advantages resulting from the practice of looking through the centre of the reflector which in any degree compensate for its manifest inconveniences. It is desirable therefore to discontinue a practice which is acknowledged to be difficult and troublesome, especially to beginners, from whose path it should be our endeavour to remove every needless impediment. I am, &c.

11, Savile-row, June, 1863. GEORGE JOHNSON, M.D.

NITRATE OF SILVER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I think it very important to call the attention of Surgeons to the superiority of the ordinary nitrate of silver over the new preparations which have been now some time in use. The new preparation, "Lunar Caustic Points, perfectly tough," is worthless as an application in Surgical cases. It is not nearly so soluble as the old brittle stick of nitrate of silver, and has scarcely any power in checking and subduing inflammation, and is useless in the cure of wounds. The same remarks apply to the cake and crystal of the nitrate of silver used for photographic purposes, which, although they may be more chemically pure, are much less efficacious for Surgical purposes than the old preparation.

It is a remedy to which I called the attention of Medical men thirty-seven years since in an essay on the use of nitrate of silver. Every succeeding year it has maintained its value in my estimation, but I fear that if the new preparations continue to be used, it will undeservedly fall into discredit.

The grounds upon which I have formed my opinion are these:—I have used the new preparations for some time, and in cases where from past experience I looked forward with a certainty to successful results, I have been much disappointed; and the cause was to me then inexplicable. To give a case—A Medical friend had a severe puncture. I applied the nitrate of silver with a conviction that he would have no further trouble with it; to my surprise the application took little or no effect, surrounding inflammation followed, also of the absorbents; further applications were made with the same nitrate of silver, but the inflammation continued its usual course, keeping my patient several days in bed, and afterwards it very slowly subsided. Another case—A patient had a severe contused wound on the middle finger of the left hand from a fall; the nitrate of silver was well applied. I expected it would heal under an adherent eschar; that it did not do so surprised and disappointed me. The wound remained some weeks in a painful and irritable state, and, when at last it healed, it left an irritable induration with swelling; this I treated again and again with the nitrate of silver without much benefit. These, and other cases I could relate (one especially, a formidable attack of erysipelas on the leg, which formerly I found yield to the application, entirely failed), led me to think there must be something wrong in the preparation of the nitrate of silver, and it occurred to me that the new preparation did not produce so much pain as the old did immediately on its application. I procured some of the old-fashioned stick nitrate of silver. The first application on the case above mentioned did more in removing the irritable inflamed swelling in four days than all former applications.

From the experience I have had daily of the use of the nitrate of silver for so many years, I am convinced that no remedy of equal power has been discovered in subduing external inflammation and healing wounds, if properly applied, although many remedies have been recommended in lieu of it.

In cases of extensive external inflammation, I would use a solution of four scruples of the old-fashioned stick of nitrate of silver to four drachms of distilled water, in common cases of inflammation and wounds, the ordinary stick as particularly directed in my last work, "Additional Observations on the use of the Nitrate of Silver."

I am, &c. JNO. HIGGINBOTTOM, F.R.S., Hon. F.R.C.S.E.

ASTIGMATISM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—"Quærens" asks, "Is stigma the precise equivalent for focus?" I reply, certainly not, but it is very well calculated to convey the same optical meaning.

Focus, of doubtful etymology, signifies, in classical Latin, a fire-place or hearth, and in poetry the fireside or domestic hearth. In optics it was evidently first used to denote the place at which fire was kindled by a lens or mirror; and then, as the cause of this phenomenon was discovered, to denote the point of union of refracted or reflected rays. Its use in optics is therefore figurative; and, moreover, as actual combustion is an exceptional occurrence, unconnected with pure light, is almost misleading. It is usually replaced by the phrase "focal point;" and, if it were not always an evil to change established nomenclature, it might be still better replaced by "point of intersection."

Στίγμα signifies a prick or puncture. (I do not know on what authority Dr. Mayne renders it "a goad for oxen," but I suspect he is in error.) In classical Latin, stigma is used to describe a mark made by burning, as upon slaves and branded persons, and has therefore some analogy to focus. But I think it is pretty well understood, in its modern applications to science, to mean a small dot or point—a focal point if necessary, as well as any other.

The distribution of light, effected by an astigmatic eye, is hardly into two foci instead of one. I said in my former letter that between the focus most anterior of the meridian of greatest curvature, and the focus most posterior of the meridian of least curvature the focal interval of Sturm was "studded with the foci of intermediate meridians." If this were so, and the foci distinct, "polystigmatism" would be an admissible word. But I apprehend, as a matter of fact, that the different curvatures of the cornea, in its different meridians, pass into each other too gradually for the production of distinct foci, and that the smallest space into which rays are brought by any meridian, is overlaid at one or all of its margins by the rays refracted in neighbouring meridians. If so, the general result would be an oblong band, analogous to the prismatic spectrum. Mathematically speaking, of course, every meridian section would have its focal point for the rays incident in its place, but these foci are probably blended and confused together, and the eye, the optical instrument as a whole, is clearly focusless, or astigmatic. The word is applied to the eye, not to one of its meridians.

The cornea, and in a still greater degree the astigmatic cornea, represents the summit of an ellipsoid of three unequal axes. This is not a surface of revolution, and cannot be obtained by grinding. It is impossible therefore to procure an artificial refracting medium that will enable us to study, upon a screen, the arrangement of rays that an astigmatic eye will produce. We must be content with calculation and inference.

Will Quærens pardon me for the suggestion that his expression "rays parallel to the vertical or horizontal meridian," when he appears to mean rays incident in their respective planes, shows, unless it be a press error, that he has hardly thought on the optical relations of the matter with sufficient clearness to qualify him for criticising its nomenclature. He will find diagrams in the recent work of Prof. Donders (of which a French translation, by Dr. Dor, of Vevay, has been published by Baillière), that will fully elucidate the whole question; and, if this source of information be from any cause inaccessible to him, it would give me much pleasure, on receipt of a private note, to send the diagrams to him by post. I am, &c., ROBERT B. CARTER.

Stroud, Gloucestershire, June 23.

COMMUNICATIONS have been received from—

Dr. JAMES VOSE; Dr. W. S. SCHOLEFIELD; Mr. W. L. MAIR; Dr. GEORGE JOHNSON; Dr. J. PARKIN; APOTHECARIES' HALL; ROYAL COLLEGE OF PHYSICIANS; Dr. J. G. LAVIES; Mr. J. FELLS; Dr. ROBERT LEE; Dr. CHARLES KIDD; ROYAL INSTITUTION; Mr. F. JORDAN; Dr. MILLER; Dr. E. ILOTT; Mr. C. CARTER BLAKE; M. OSSIAN HENRY; Dr. ROBERT SIM; Dr. GEORGE BANKS; EPIDEMIOLOGICAL SOCIETY.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 27, 1863.

BIRTHS.

Births of Boys, 1025; Girls, 934; Total, 1959.
Average of 10 corresponding weeks, 1853-62, 1738·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	619	539	1158
Average of the ten years 1853–62	599·2	524·5	1123·7
Average corrected to increased population ..	..	..	1236
Deaths of people above 90	1	4	5

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	6	5	10	1	4	1	4
North ..	618,210	8	4	20	4	7	6	7
Central ..	378,058	11	6	16	1	5	8	2
East	571,158	16	2	23	..	4	9	12
South ..	773,175	8	9	20	6	9	16	6
Total.. ..	2,803,989	49	26	89	12	29	40	31

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·912 in.
Mean temperature	61·2°
Highest point of thermometer	76·
Lowest point of thermometer	49·
Mean dew-point temperature	52·
General direction of wind	W.
Whole amount of rain in the week	0·17 in.

APPOINTMENTS FOR THE WEEK.

July 4. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

6. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital 1½ p.m.; Samaritan Hospital, 2½ p.m.

EPIDEMIOLOGICAL SOCIETY, 8 p.m. Dr. Wm. Ord, "On an Epidemic of Jaundice." Mr. Radcliffe, "On the Unpublished Report of the Cholera Commission of 1861 in India."

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

7. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

ANTHROPOLOGICAL SOCIETY OF LONDON, 7½ p.m. Prof. John Marshall, F.R.S., "On Cases of Microcephaly." C. Carter Blake, Esq., Hon. Sec. A.S.L., "On Recent Evidences of extreme Antiquity of Man."

8. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

9. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

10. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

Medical Men Remunerated in every Case Submitted to them.

STAR LIFE ASSURANCE SOCIETY,

48, MOORGATE-STREET, LONDON.

Directors:

Chairman—CHARLES HARWOOD, Esq., F.S.A., Judge of the County Court of Kent, and Recorder of Shrewsbury.
Deputy-Chairman—JOHN CHURCHILL, Esq.

The STAR LIFE ASSURANCE SOCIETY was founded in the year 1843.

ANNUAL REVENUE, £120,000.

CLAIMS PAID.—The total claims arising from death which have been discharged by the Society amount to £300,000.

BONUSES.—Three distinct calculations have been made with a view of appropriating the surplus sum or profit arising from the operations of the Society: at the last, made at the beginning of the year 1859, the Actuary reported that, after putting by £180,879 18s. 10d. as a reserve for future contingencies, there was £67,347 15s. 9d. available for division.

ASSETS.—The Assured have the security not only of the Capital Stock, but of a large invested sum, amounting to MORE THAN HALF-A-MILLION, which, with the well-known character of the Directors of the Society, is a substantial guarantee that all claims will be met with readiness and punctuality.

The following Table will best illustrate the progress of the Society:—

Year.	Number of New Policies issued.	Sums Assured thereby.	Annual Premiums therefrom.			Total Accumulations from all sources.		
		£	£	s.	d.	£	s.	d.
1856	603	204.451	6,597	18	3	202,110	7	2
1857	572	221.122	7,785	9	5	238,055	1	7
1858	658	235,350	8,582	0	9	274.797	15	4
1859	812	294.495	10,172	19	6	309,444	5	2
1860	902	336,290	11,312	15	9	360,530	3	0
1861	1,115	361.960	12,868	3	11	414,231	5	9
1862	1,007	375,197	12,562	7	9	*484,976	14	0

JESSE HOBSON, F.L.S., Secretary.

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* Since this Report was closed, the Accumulated Fund has so increased as to raise it above Half-a-Million.

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WITH WHICH IS INCORPORATED THE

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ORIGINAL LECTURES.

◆

A LECTURE
ON
SOME CASES OF AMPUTATION, WITH OBSERVATIONS ON PYÆMIA.

DELIVERED AT THE
University College Hospital.

By RICHARD QUAIN, Professor of Clinical Surgery.

[Reported by SAMUEL GEE, House-Surgeon.]

Injury of Right Leg—Disease of Tibia—Necrosed Bone Removed from time to time—Amputation.

Case 1.—Margaret V., aged 27. No history or symptoms of syphilis. Two years ago was kicked on right shin. This injury was followed by abscess, and the separation of a large number of pieces of dead bone of different sizes. Was an in-patient of a London Hospital on two occasions before she was admitted into this. The ulcer which existed on the front of the leg never healed entirely. There was much throbbing pain beneath the ulcer, deep in the bone, which was not relieved when a small abscess in that part of the bone was opened by a trephine. Subsequently plates of necrosed bone, separated from the inner part of the bone, were removed, and patient left the Hospital with the large ulcerated surface very nearly healed up. But she returned in a few weeks.

The pain was so great that the patient insisted on an operation to remove the limb.

Mr. Quain amputated through the lower part of the thigh by anterior and posterior flaps. The tibia was generally thickened and condensed. It was owing to the extent of disease of the tibia that the case was thought not to admit of amputation below the knee.

Examination of Tibia.—The bone beneath the ulcer is itself ulcerated for four inches by one and a half; in fact, the granulations spring from the bone. The texture of the bone behind the ulcer, and for some inches above and below it, is condensed, ivory-like, without any trace of medullary canal. A new formation of compact bone has taken place on the posterior surface of the tibia behind the ulcer, so that, in spite of the ulcerated excavation, the bone there is as thick as ever. There is a small abscess in the bone above the ulcer, surrounded by dense bone.

For twenty days after the operation the patient vomited after every kind of food, notwithstanding that it was given only in small quantities at a time, and that opium and other sedative medicines were administered. The form of stimulant which suited her best was Scotch ale, which she begged for. The first piece of meat was not taken until twenty-six days after the operation; yet the stump went on to heal well.

After the lapse of nearly two months the patient's general health began decidedly to improve, and she has gone on to gain strength without interruption. The stump has entirely cicatrised, but a sequestrum is felt at the end of the femur through a small opening on the fore part of the limb.

Self-Mutilation—Great Loss of Blood—Primary Amputation of Fore-arm.

Case 2.—Jane B., aged 38, married, no children, has been subject to fits of drunkenness for at least six years past. In the last year had seven such "fits," each lasting a week or two, and separated by intervals of complete sobriety. Is said to have been "queer" three times, not under Medical care, but subject to delusions—no doubt mild delirium tremens. Once tried to stifle herself by thrusting rags into her mouth. Last drunken bout lasted twelve days. Had meditated suicide the week before admission. On the day of admission to the Hospital seemed pretty well to landlady; was not drunk; but on landlady's happening to go into patient's room later in the day, between 7 and 8 p.m., the patient showed the maimed arm. The husband was at once fetched home; he and the wife walked about a furlong to a cab-stand, then drove towards the Hospital, but stayed at a tavern on the way to have some brandy-and-water, whence both walked to Hospital.

A delusion connected with a clock in the patient's room seems to have been the cause of her having acted as she did. This clock, or something concealed in it, occasionally issued commands to her, and was in turn feared and prayed to.

There was evidence, at the woman's lodgings and in her extreme paleness, that much blood had been lost. The instruments with which the mutilation was accomplished were two ordinary knives and a chopper.

On admission to Hospital, calm, not intoxicated, very pale.

Injuries—Left hand and distal row of carpal bones have been cut off from the rest of the limb. Skin and tendons cut on a level with bones. Radial and ulnar arteries seen pulsating, but not bleeding. Cartilages of both rows of carpal bones quite intact, not scraped or shaved in slightest degree. Patient herself says that she cut down to the bones, and then, being unable to separate the hand in any other way, she laid her arm on the table and twisted the hand off. She says that after the separation of the hand the clock recommended the removal of the whole arm at the shoulder-joint. This she thought too high, but not daring to disobey altogether, she began to sever the limb at the fore-arm; in this she was probably interrupted by the landlady. At the junction of the middle and lower thirds of the fore-arm (of the same side) there is a transverse cut, one inch and a half long, reaching down to the bones. When the finger is passed into the wound, and pushed upwards, there is found to be much laceration of the soft parts above this wound.

Amputation was performed within an hour of patient's admission, at upper third of fore-arm, above the wound last noticed. Much delirium after operation. Opium was given. The spirits of the patient were exceedingly bad for first three weeks after the operation. Her appetite was bad; she vomited at times. Tongue dry and furred. Three times she had a slight shivering, followed by sweating. During the next week she seemed to improve, but in a few days her general condition became even worse than before; the appetite was altogether gone; the vomiting became much more frequent; even brandy was rejected. Six weeks after the injury the patient, though now in much better health, still reverted to her wonderful clock. She was discharged ten weeks after admission. From the beginning the stump went on well, with, however, some occasional pain in it The cicatrisation was complete, and there was no pain when the patient left the Hospital. The diet was as good as the patient could take; on some days she would have little but the stimulants allowed her—which were changed from time to time—gin, brandy, beer, ale. The medicines given were at different times ammonia, mineral acids, and iron.

Hand and lower part of Fore-arm cut off by Machinery—Primary Amputation—Rapid Progress towards Recovery—Severe Rigor on Fourteenth Day—Death on Twenty-third Day.

Case 3.—James R., aged 29, a robust, healthy, sober man. While he was feeding a steam chaff-cutting machine, his arm was drawn in (as far as the shoulder) between the cylinders; the hand and lower half of the fore-arm were cut off; much blood was lost. The radius and ulna broken off, projecting from ragged end of stump; the muscles had retracted from the bones, and the skin from the muscles. The soft structures of the part of the fore-arm which was left shortened were much crushed and infiltrated with blood. About the middle of the outer side of the upper arm there was a laceration an inch long, reaching down to the muscles. There was much oozing of blood from both injuries.

Amputation, Two Hours after Accident, above Elbow-Joint.—An hour after the operation the patient expressed himself very hungry; and he ate a plateful of cold beef. He was put in a small ward where there was no other patient.

Fourteenth Day:—Advancing rapidly to recovery. Has been out of bed for last two or three days. Has all along taken full meat diet with beer. From the stump all the ligatures but one have come away. All that remains to be healed is a narrow granulating surface at the line of union of the margins of the flaps.—Same evening had a severe rigor, followed by sweating. Subsequently rigors repeated nearly every day, sometimes two a day; mostly so severe as to shake bed, and followed by profuse sweats. Although he got gradually lower, yet the day before death he was able to raise himself in bed to read a newspaper Tongue remained clean; appetite remarkably good; sleep sound. But stump ceased to suppurate; granulations and healing edge disappeared. There were no symptoms or local signs of secondary deposits until the twenty-second day in the evening, when he was attacked with sudden violent pain in the right side of his chest. Dyspnœa, with lividity of face, arose, followed by drowsiness and death on the morning of the twenty-third day. When the rigors began, the patient was removed into a much larger, unoccupied ward; windows were open day and night. The liberal diet allowed throughout was now increased, and patient took all he was allowed, viz., the extra full diet of the hospital, beef-tea, milk, eggs, with brandy,—ten ounces per diem. Quinine in large doses with sulphuric acid; towards the end ammonia.

Post-mortem.—Joints—No pus in or around any joint. Right knee enlarged from excess of synovia; no redness of membrane; surface of cartilage entire. Thorax—General pleurisy at right side, with much exudation of lymph and turbid serum. Left Pleura—Cavity almost obliterated by old adhesions. Right lung full of whitish nodules of every size up to that of a walnut, and in all stages up to complete fluidity. Intermediary lung tissue collapsed, except along anterior margin. Left lung congested but crepitant. Two puriform collections at lower margin. Liver—Three so-called abscesses. In spleen, kidneys, heart, brain, nothing particular. Brachial and axillary veins healthy. Lower end of humerus denuded of periosteum, a shallow commencing line of demarcation a short way up from cut end. Two small collections of puriform matter in medullary canal; intermediate medulla dark and sloughy.

Severe Injury to Leg—Primary Amputation—Pyæmia—Death on Seventeenth Day.

Case 4.—Frederick O., aged 14, not a vigorous boy, but at time of accident in good health. Trying to mount a locomotive in motion, he slipped from the greasy step, and his right foot was crushed between the wheel and the rail. Soft parts lacerated. Lost but little blood. Amputation was performed the same day at the middle of the leg. For the first ten days there was nothing unusual in the general or local condition. On the eleventh day, a slight rigor, lasting ten minutes; another soon after. This was followed by a febrile condition, which lasted until the time of death. There were no more rigors. Diarrhœa and albuminuria occurred. Delirium at first at night only, then constant, and lastly giving way to unconsciousness. The day before death the conjunctivæ became yellow, and petechiæ appeared on the chest. He died on the seventeenth day. The left elbow was painful on the thirteenth day, and red and swollen on the fourteenth. The treatment consisted in giving patient all possible support.

Post-mortem.—Much puriform fluid outside left elbow-joint; turbid synovia within joint. Lungs studded with minute collections of puriform matter; commencing pneumonia posteriorly; no pleurisy. Liver contained many puriform collections, some very large. Stump.—Periosteum of tibia separated from underlying bone just above its cut end; uncovered part of bone dull white, and dry. Medulla sloughy for an inch and a half up. Fibula affected in same manner, but to a less extent. The only vein that presented any peculiarity was a small one that entered the popliteal vein. Its coats were much reddened.

After having commented on the circumstances of these cases individually as they occurred, and having discussed the facts brought to light in the dissections in connection with the theories now held respecting the "immediate causes" of the morbid phenomena, Mr. Quain made the following observations on the subject of the "predisposing causes" of pyæmia:—

Four amputations were performed nearly at the same time, and the patients were in the Hospital together. Two were attacked by pyæmia and died; two recovered without having been affected with that disease. Is there anything in the facts of the cases to account for the different results?

The prevailing opinion is that there are certain circumstances which lead to the production of that pest of Surgery—for so that may indeed be called which, as statistics shew, destroys nearly half the cases of primary amputation. Nothing in connection with pyæmia is of so much importance as the discovery of what the circumstances conducive to the disease really are, for to avoid the so-called "predisposing causes" would be to prevent pyæmia. It is stated in treatises on general Surgery that these causes may be looked for in the previous and present condition of the patient as to general health and strength, and in the circumstances in which the patient is placed after operation. *a.* The previous existence of ill-health, disease, or other source of debility, renders, it is asserted, the patient less able to resist the injurious influence of bad "surrounding circumstances;" which, in such cases, are said to be found in the impure air of a Hospital crowded with patients, badly constructed, or unclean. Suppose we apply this seemingly reasonable statement as to the nature of the predisposing causes to some of our cases:—Two were healthy males, two unhealthy females. Only the latter two recovered. To make the comparison as close as possible, let us take the cases of primary amputation of the upper limb. The male (Case 3) was young, vigorous, and in perfect health; he suffered nothing from the "shock" either of the accident or of the amputation; nothing from the chloroform, or rather was so far from this, that he asked for, and took with relish, a good meal an hour after the operation. He had not one unfavourable symptom before the fourteenth day; his tongue was clean; his countenance and skin natural. Even after the fatal rigor, he continued for a week to take food well, and to be interested in external circumstances, insomuch that he read a newspaper the day before his death, and was at the same time free from indications of serious disease. Yet he had pyæmia, and died. Now turn to the other picture. A female (Case 2), habitually a drunkard, and subject to fits of delirium, deliberately, by a slow process, cut off her own hand; she lost blood largely, was pale and bloodless in appearance, was delirious after the amputation (the Surgical amputation), and much depressed for weeks, vomited frequently, took little food or support of any kind except stimulants, yet the wound continued to heal without interruption, and the patient recovered (Her health is now—June—as good as ever.—S. G.) So likewise in case 1, the system was depressed by previous long-continued pain and illness, she vomited after every kind of food for more than three weeks after the operation, yet the stump went on meanwhile to heal prosperously.

b. So much for the "personal condition" of our patients; now a word as to the "surrounding circumstances." What was the state of the Hospital at the time referred to? You know from your own observation that very recently every part had been cleaned, painted, and washed; that the areas and ground around the Hospital had been fully cleansed. The male patient, whose case has been dwelt on, was not in a crowded ward; in fact, he had a ward to himself, a small one, certainly, but one intended for two patients, and ventilated with a fireplace and two windows, as well as the door; the same ward in which there is now a patient recovering from amputation close to the shoulder-joint, who is in perfect health. The boy who died (Case 4) was in a ward exactly corresponding to that in which the Cases 1 and 2 were lodged.

In short, while the surrounding circumstances were favourable in all, there were present in Cases 3 and 4 all the conditions which enable the system to resist disease, yet both died; and in Cases 1 and 2 everything that favours the production of disease seemed to be present, yet both did well.

We should not leave these cases without noticing the history of a patient brought to the Hospital while some of them were still with us.

Case 5.—A delicate boy, aged 15, was admitted April 21, 1863. A fortnight before admission he had received a blow just below the left knee. This was followed by pain and swelling at the part injured, and in a few days by great general depression, vomiting, and delirium; no rigors. On admission he was semi-comatose, and in a perfectly "typhoid condition." The leg was swollen and very tender. Both elbows and wrists became red and swollen. He died April 23, two days after admission.

Post-mortem.—Periosteum of left tibia separated for nearly whole length, puriform matter being interposed between it and the bone. Both lungs were studded throughout with minute collections of matter. There were similar puriform spots in both kidneys. Liver healthy.

It was ascertained upon inquiry that this lad had been engaged in a trade which was not unhealthy—that of a goldsmith; that he was well lodged, sleeping in a room alone, and in a healthy district.

Here is an example of pyæmia which arose neither in a Hospital nor after a Surgical operation, but in the course of what there was evidence to show had been fair previous health, and among "surrounding circumstances" not conducive to disease.

With these cases, and such as these before us, surely it must be allowed that much still remains to be found out respecting the "predisposing causes" of pyæmia, and the means to be taken to prevent it, or to lessen its amount. It prevails at one time much more than at another, and when it is known to prevail, operations which are not imperative to be performed at once, are deferred. It is to some atmospheric condition at present unknown that I am disposed to look for the solution of the difficulty. Practically we must advise cleanliness and other means of health; for though the presence of all circumstances conducive to health will not, as we have seen, prevent the occurrence of pyæmia, yet, because they are generally conducive to health, they are always important. To the regulation of diet I attach much importance, more than to the administration of drugs. Patients lying in bed after operations do not seem to me to require to be largely fed; waste does not go on to the same extent as when they are engaged in the business of life; and by the amputation a part of what the food had to maintain has been taken away. Meat and stimulants together are not, in my opinion, necessary except in moderate quantities. The rule I would lay down is that when the patients can take meat, stimulants should be always sparingly used and often withheld, unless, indeed, there be a clear indication for their administration. Hospital patients ordinarily use stimulants as occasional luxuries, not as a common article of diet; yet it is not easy to oppose the inclination for stimulants which such persons manifest when admitted into a Hospital; they are best pleased when the dietary is liberal in beer, wine, or spirits. It is when food cannot be taken that stimulants give an important help towards sustaining the patient. Looking back to the cases detailed, you will see that it was not those who took food best that remained free from pyæmia and did the best in the end.

The tedious process of self-mutilation, of which Case 2 is an example, is important in a Medico-legal as well as interesting in a physiological point of view. Doubtless the condition of the woman's mind, and the absorbing influence over it of "the spirit of the clock," dulled the sensibility to pain. The fact, too, in the same case, of the cessation of bleeding after division of the radial and ulnar arteries without any attempt to stanch it has its value. In connexion with this, the state of the divided arteries—omitted from our very brief outline of the case—ought to be stated. They were jagged at the ends, and were much retracted; but they contained no clot.

LECTURES
ON
ECZEMA,
(INCLUDING ITS IMPETIGINOUS, LICHENOUS, AND PRURIGINOUS VARIETIES,)

DELIVERED AT THE
Dispensary for Skin Diseases, Glasgow.

By T. McCALL ANDERSON, M.D., F.F.P.S.
Physician to the Dispensary for Skin Diseases; Physician to the Deaf and Dumb Institution, etc., Glasgow.

LECTURE IV. (a)

You will remember, gentlemen, that in the preceding lecture, on entering upon the treatment of eczema, I endeavoured to impress upon you the necessity, in the first place, of attending to the state of the internal organs, and more particularly to the condition of the stomach and bowels. I then discussed those cases which are under the influence of cod-liver oil, generous diet, iron, and tonics generally, and entered upon the consideration of that class of cases in which the general health appears excellent, and which are more amenable to arsenic, sulphur, and alkalies. The preparations of *sulphur*, though not so generally useful as those of arsenic, are highly serviceable in the treatment of some cases of eczema, especially when the eruption occurs in persons of the lymphatic temperament, and when it is on the decline. When speaking of the administration of purgatives, I told you that the advantage which a sulphur purge possesses over a calomel one is, that it is eliminated in part by the skin, and exercises an alterative effect upon that structure. If, however, we wish to avail ourselves to the full extent of its alterative action, it is advisable to prescribe a course of one of the natural mineral waters which contain sulphur. Those of Harrogate and Moffat in this country, and of Enghien, Baréges, and Luchon on the continent have the greatest reputation in this respect; and, while some of these waters may be had from the Apothecary, it is always more judicious, when it can be effected, to send your patient to the spring itself; for he is thus certain to get the waters fresh and pure, and, away from home and the fatigues and anxieties of business, his body is at the same time invigorated and his mind refreshed.

Alkalies are not nearly so generally employed as the preparations of arsenic and sulphur in the treatment of eczema. They are most beneficial when the patient is much addicted to the use of stimulants, and when there is a tendency to acidity of the stomach and to the deposit of lithates in the urine, or to gout or rheumatism. The preparation most in vogue is aqua potassæ, which may be given, largely diluted with water, in doses of twenty minims thrice daily to an adult. The alkali which I am most in the habit of using, however, and which has not, I think, been tried hitherto in this country for such a purpose, is the sesquicarbonate of ammonia in doses gradually increasing from ten up to thirty or even forty grains thrice daily, care being taken that the preparation is fresh and of full strength. A dose of forty grains is often borne well by a patient whose stomach has been gradually accustomed to its reception, while a smaller dose often occasions vomiting in the case of those who have not been in the habit of taking it. Sometimes it is well to continue the ammonia with Fowler's solution or one of the other arsenical preparations. If there is a decidedly gouty tendency, small doses of wine of colchicum (say ten drops), and in rheumatic habits, the acetate or bicarbonate of potash (in half-drachm doses) may be added to each dose. The alkalies must be given *largely diluted* with water, and the dose must be gradually increased till the medicine disagrees or the eruption begins to fade.

Hydrocotyle Asiatica has been greatly extolled of late, especially by the French, in the treatment of eczema. It has been very little used in this country, however, although it seems well worthy of a trial, if we may judge from the high encomiums which have been passed upon it by our Continental brethren. I have not yet tried it in Dispensary practice, owing to the narrow-minded policy of the French manufacturer, who sells each little bottle of granules at five francs; and, as there are about eighty granules in a bottle, it follows that every ten or fourteen days five francs must be expended, which is too much for the ordinary run of Dispensary patients. In private practice I have tried it several times, and apparently with benefit; but my experience of it is not yet sufficient to enable me to decide upon its merits. I would advise you, however, to try it in cases which resist the ordinary means of cure. The directions for the use of the granules are given in a paper which is enclosed along with each bottle.

Before leaving the internal treatment, let me lay before you four rules which you must carefully attend to in the employment of alterative medicines:—

1st. Let the dose, at first small, be gradually increased till the medicine disagrees, or till the disease begins to yield, and then let it be gradually diminished.

2nd. If the medicine disagrees, do not omit it altogether without very good reason, but try it in smaller doses, or in another form, or omit it for a few days till the bad effects have passed off.

3rd. To give it a fair trial, it must be continued for a considerable period of time, because in some cases the eruption does not disappear till after it has been administered for many weeks.

4th. Do not permit the patient to give up taking the medicine till some weeks have elapsed since the complete disappearance of the eruption.

If, as I hope, I have convinced you of the great benefit which accrues from the judicious selection of internal remedies in the treatment of eczema, and of their power, in many instances, of removing the eruption when administered alone, you will, perhaps, be hardly prepared for the statement which I make, as the result of some *experience*, that the *local* treatment is even more effectual than the constitutional, although it must be confessed that the applications made use of by many Practitioners in this country are unfortunately too often ineffectual, and not unfrequently injurious.

I shall not attempt a description of all the preparations in general use in the local treatment of eczema—some of them good, some useless, many hurtful—but shall endeavour to lay before you a short account of those which I have found most valuable, and, what is of the greatest importance, to point out, as far as possible, the indications for their use.

(a) These Lectures have been carefully revised, and many alterations and additions made.

The first point in the local treatment of every eczematous eruption, without exception, is to remove all the crusts which have formed upon it. Till this is done, we can only guess at the condition of the parts beneath; our applications must, in consequence, be selected at random, and these cannot reach the diseased surface whose condition they are intended to modify. You will often meet with opposition on the part of the patient or friends in carrying this injunction into effect, either owing to their laziness, to their preconceived opinions, or to the pain which is sometimes experienced in the removal of the crusts. Patients come here, day after day, informing me that they have done what they could, but have only partially succeeded. You should, in such instances, repeat your instructions, and send your patient home again, for my invariable rule is to refuse to prescribe any local applications till the diseased surface is fully exposed to view, by which means much less time is lost in the end, and the subsequent treatment is much more satisfactory.

The removal of the crusts is a very easy matter, and each practitioner has his own favourite method of procedure. I usually recommend a poultice composed of crumb of bread and hot almond oil to be applied to the eruption at night, and if the crusts do not come away with the poultice in the morning, the part is lubricated with fresh almond oil, and the crusts removed with the finger nail about half an hour afterwards, when they have become thoroughly softened. When the crusts reappear, as frequently happens, especially at the commencement of the treatment, they must invariably be removed before the reapplication of the curative agent.

Let us suppose, now, that all the crusts have been removed, and the diseased surface fully exposed to view, what local applications are we to make use of?

If the eruption has just made its appearance, if the surface is acutely inflamed, if it is studded with numerous vesicles or pustules, but particularly if *burning heat* is complained of in place of itching, local sedatives must be employed. A very good application is a cold potato-starch poultice, a small quantity of a powder containing camphor being sprinkled over its surface before being applied, which relieves at once the burning heat.(b)

Or, instead of poultices, emollient ointments may be employed, such as the simple or benzoated oxide of zinc ointment, cucumber ointment (Neligan), or cold cream. A mixture of powdered oxide of zinc and glycerine, in the proportion of half an ounce of the one to two ounces of the other, forms likewise a very soothing application, and to these may be added a little camphor if necessary.(c)

When the disease becomes chronic, as is indicated more particularly by the disappearance of the burning heat, and the supervention of itching, the local applications which are appropriate are very different, but even they vary according to the stage of the eruption.

If there is *infiltration* of the skin to any extent, the local treatment which I am in the habit of prescribing is that recommended by some continental dermatologists—in connexion with which the name of Hebra must always be honourably associated—and which has only of late began to peep forth in fragments in English Medical journals. This is the treatment by means of *potash* applications, which has been uniformly adopted at the Dispensary, and with great success. Having had the privilege some years ago of witnessing the carrying out of this means of cure in Hebra's wards at Vienna, some of the prescriptions may resemble very much, or even be identical with, those of that distinguished dermatologist, though I am unable to state at this moment which are due to him and which are mere modifications of my own. I trust, however, I have sufficiently done justice to his merits, and that you will acquit me of the desire of taking any credit, except in so far as the success of this treatment has been first thoroughly established in this country by my colleague, Dr. Buchanan, and myself.

The strength of the local application varies with the amount of the infiltration, and likewise with the extent of the eruption; for of course when the disease is extensive, it would be injudicious to make use of those very strong applications which may be applied with safety in the more circumscribed cases.

If the infiltration is slight, or the rash extensive, common *potash soap* (soft soap, black soap, sapo mollis, sapo viridis), or a solution of one part of it in two of boiling water, a little oil of rosemary or citronella being added to conceal in part the odour, may be used.(d) A piece of flannel dipped in this should be rubbed as firmly as possible over the affected parts night and morning, and the solution allowed to dry upon them, though it should be washed off before each reapplication; or a piece of flannel wrung out of the solution may be applied to the part, and left in contact with it all night if the patient can bear it.

A more elegant preparation is the *aqua potassæ* (Ed. Ph.), which may be painted over the eruption night and morning with a large brush, its irritant action being neutralised by means of cold water when the smarting becomes excessive.

Instead of soft soap or aqua potassæ, solutions of *potassa fusa* may be employed. In the mildest cases, with only slight infiltration, two grains of potassa fusa in an ounce of water; in the more severe, five, ten, twenty, thirty grains or even more. An ounce of water may be used, but I rarely resort to a stronger solution where the eruption is extensive. Even the solution containing thirty grains to the ounce, which may be applied in the same way as aqua potassæ, must be washed off with water very speedily, and the application should not be repeated oftener than once daily at the most. When such a strong solution is prescribed, and, especially if the eruption is extensive, it is advisable for the Physician to apply it himself, at first at all events. The solution has been used too strong, or been allowed to remain on too long, if it produces any manifest destruction of the skin. When the eruption is very limited and very obstinate, a much stronger solution may be applied, and Hebra sometimes uses a solution of one drachm of potassa fusa in two drachms of water, or even employs the solid caustic itself. This must be done, however, with the greatest circumspection, and the caustic washed off almost immediately, else it is certain to produce great destruction of the skin.

When these strong applications are used, and there is a tendency to the formation of fissures, it will be well to apply cod-liver oil or glycerine to the parts every night, by which means that brittle condition of the skin, which is so much favoured by the use of potash locally, and which leads to the formation of fissures, is in part avoided.

Instead of potassa fusa, some recommend solutions of chloride of zinc in similar proportions, but I have very little experience of it, being so well satisfied with the performances of the former. The following case, however, proves that it is a useful agent:—

Hugh D., aged about 40, saddler, came to the Dispensary for Skin Diseases, March 17, 1862. Small patches of eczema were noticed on the backs of his hands, sides of his fingers, and about his wrists. These were very itchy, with a good deal of infiltration; some of them studded with vesicles, and exuding a serous fluid, others dry and scaly. Although some of the patches were situated over the joints of the fingers, there were no fissures. A solution of chloride of zinc (℈j. to the ℥j. of water) was ordered to be painted over the affected parts morning and evening, and, if the action was too severe, it was to be moderated by the use of cold water. In the intervals between the applications he was to bathe the hands repeatedly in cold water.

March 24.—Greatly improved; itching nearly gone; infiltration of skin much diminished; serous exudation very slight, and only after the application of the zinc lotion.

The patient noticed a slight tendency to the formation of new vesicles on and around the patches, which was at once checked, however, by the lotion.

March 31.—Eruption gone.

(b) ℞ Camphoræ, ʒss.
Alcoholis, q. s.
Pulv. Oxydi Zinci,
Pulv. Amyli, āā ℥iij. M.

Siq. Sprinkle a little over the part, or upon the poultice occasionally, to allay the burning heat. Let a small quantity be made at a time, and let the powder be kept in a stoppered bottle, as it loses its strength by exposure to the air.

(c) ℞ Camphoræ, ℈ij.
Pulv. Oxydi Zinci, ℥ss.
Glycerinæ, ℥ij.
Cochinillini, gr.ij.
Spt. Rosarum, ʒj. M.

Siq. Stir the mixture before using it. Rub a thin layer over the inflamed part twice or thrice daily. A most elegant formula.

(d) ℞ Saponis Mollis, ℥i.
Aquæ Bullientis, ℥ij.
Olei Citronellæ, ʒss. M.

When any of these irritants are made use of, they cause smarting, and, when stronger mixtures are applied, often considerable pain; but patients have informed me that, although the smarting and pain are severe, they prefer it to their old enemy, the itching. On the other hand, some patients, although this is rarely the case, will not submit to a repetition of the remedy. I was particularly struck with this in the case of a Medical man in this city, who consulted me some time ago about an extensive eczematous eruption of old standing, and for whom I prescribed the mildest of the applications above referred to. He told a friend shortly after that he had applied it once, and that it had nearly killed him, the fact being that he had been affected with eczema so long, and had tried so many useless drugs, that his faith in the effect of remedies was shaken, and he would not give a fair trial to a system of treatment which, though a little unpleasant at first, would certainly have cured him. But Medical men are notoriously the worst and most refractory patients to deal with.

Having pointed out to you that the strength of the potash or zinc solutions which are employed varies with the amount of infiltration of the skin, it will probably have occurred to you that, when the eruption is extensive, and some of the patches much more infiltrated than others, a weak solution may be applied to the latter, a stronger one to the former; and it is equally obvious that, as the infiltration subsides, the solution may be gradually diluted.

Often, by continuing the use of a weak potash solution for some time after the infiltration is gone, all trace of the complaint disappears, but in most instances it is better to substitute for it one of the preparations about to be mentioned as the disease verges upon a cure. But if, on changing the local application, the infiltration of the skin reappears to any extent, you must at once have recourse to the potash solutions again. I have just one caution to give you before leaving this subject, namely, that you must be careful in the use of these solutions, and especially the stronger of them, in the case of infants, of delicate females, or of old and infirm persons, as the shock produced by their application may possibly be followed by serious results.

While these applications are being employed, cold water forms a very agreeable and useful adjunct. The affected parts may be bathed repeatedly with it during the day, and it is advisable that it should be allowed to fall upon them from a height. Sometimes cloths wrung out of cold water may be placed upon the eruption with advantage in the intervals between the applications, and, if the rash is very extensive, much relief is experienced by plunging into a cold bath, or making use of the shower-bath or cold douche.

I have already pointed out that in mild cases the eruption is often kept up by the scratching alone, and that in these instances local sedatives have sometimes the effect of curing the disease by allaying the itching, and the desire to scratch the part. Hence you will understand how, in more severe cases, while the scratching does not of itself keep up the disease, it certainly tends to aggravate it and to make it more rebellious.

We must therefore exhort the patient to refrain from scratching as much as possible, and at the same time we must employ means to allay the itching. The potash and zinc preparations have certainly this effect in a marked degree, and so has the application of cold water (for the time); but sedatives and narcotics taken internally are not, in my opinion, of the slightest service except in so far as a large dose may produce sleep, and, when the patient has long been deprived of it, owing to the itching, this is much to be desired. Lotions of dilute *hydrocyanic acid*, in proportions varying from ♏v. to ʒj. (Ed. Ph.) in an ounce of water or glycerine, may be applied with advantage whenever the part is itching, instead of *giving way to the desire to scratch.*

When such a strong solution as ʒj. of prussic acid to the ℥j. of water is used, it must not be applied over a very extensive surface, and the patient must be warned that it is a very powerful poison. You will often find it of advantage to combine the prussic acid with one of the potash applications formerly referred to, in the proportion say of ♏x. to an ℥j. of the mixture.(e)

Some prefer the use of cyanide of potassium in the form of ointment. For this purpose from five to ten grains may be mixed with cold cream, or the benzoated oxide of zinc ointment.(f)

Tarry preparations are of the greatest value as local applications in the treatment of eczema, though they are of no use whatever when administered internally. They have long been in vogue in this country, but have too frequently been used in a routine way, and without discrimination. You must therefore bear in mind the fact that they are chiefly of use in the declining stages of eczema, when the infiltration and itching are moderated.

Common tar (*Pix liquida*) is the application most frequently used at the Dispensary, on account of its cheapness, but in private practice you may employ more elegant preparations, such as the oleum rusci or oleum cadini (oil of cade). The latter, which is the product of the dry distillation of the wood of the *Juniperus Oxycedrus* (g), is manufactured at Aix-la-Chapelle, and you must be sure that it is got there, else you may have sent to you a liquid prepared from common tar.

Whichever of these preparations you select should be rubbed firmly over the eruption by means of a piece of flannel, and allowed to dry upon it. It should be applied thrice daily, and washed off as well as possible with soft soap, or, amongst the higher classes, with petroleum soap.

Several kinds of soap containing tar and oil of cade, under the name of tar and cade soaps (the latter should be obtained from Aix-la-Chapelle, but is very expensive—3s. 6d. a cake), are used by some instead of these preparations in their pure state. If you employ them, you should use them like common soap—only rub them more firmly over the parts—and in many cases you will find it of advantage to allow the soap to dry upon the eruption.

I rarely employ tar alone, however, in the treatment of eczema, but usually combine it with one of the potash solutions, in which case you may use it before the infiltration has subsided; for while I told you that tar was most useful in the declining stages of eczema, I merely meant you to understand that it should not entirely take the place of the potash or zinc solutions while the infiltration was considerable. A most admirable preparation, one of Hebra's, and which is used to a great extent at the Dispensary under the name of "tinctura saponis viridis cum pice," and with the most charming effect, is a mixture of equal parts of common tar, methylated spirit, and soft soap, which should be used exactly in the same way, and as frequently as the simple solution of soft soap.

The following case, reported by my assistant, Mr. Arthur Jamieson, many similar to which you have an opportunity of seeing almost every day at the Dispensary, illustrates the beneficial effects of this mixture:—

William S., aged 45, labourer, came to the Dispensary for Skin Diseases on Nov. 10, 1862. He was affected with "eczema impetiginodes" of both ears and the whole of the face, with the exception of the nose. He complained of intense itching, with considerable heat of the parts. The exudation, of a purulent nature, was abundant, and in many parts had concreted, forming large crusts which almost entirely covered the whole of his face. The infiltration of the skin was great; his general health pretty good.

He was ordered a calomel and scammony purge, and a mixture of oxide of zinc and camphor, in the proportion of gr. xx. of the latter to ℥j. of the former, was applied night and morning to the eruption after the removal of the scabs.

13th.—No improvement; ordered the tinctura saponis viridis cum pice.

24th.—Eruption completely gone.

In private practice, where expense is less an object than the elegance of the preparation, you may substitute oil of cade for common tar, and rectified spirit for methylated spirit, while a little oil of lavender may be added to conceal in part the disagreeable odour,(h) or, instead of using soft soap at all, a solution of potassa fusa may be added to the mixture, the amount of the caustic potash depending upon the amount of infiltration of the skin.

(e) ℞ Potassæ Fusæ, gr. x.
Acid, Hydrocyan. dil. (Ed. Ph.), ℈j.
Aquæ Rosarum, ℥ij. M.

Sig. Rub a little firmly over the eruption night and morning, and when the itching sensation is severe.

(f) ℞ Cyanidi Potassi, gr. vj.
Cerati Galeni (Paris Codex), ℥j.
Cochinillini, gr. j. M.

Sig. Rub a little firmly over the parts which are itching, but let none of the ointment remain undissolved on the skin.

(g) "Medicines: their Uses and Mode of Administration," by J. Moore Neligan, M.D. Fourth Edition. Pp. 455. Dublin.

(h) ℞ Saponis Mollis,
Spt. Rectificati,
Olei Cadini, āā ℥j.
Olei Lavandulæ, ʒjss. M.

Sig. Rub a little firmly over the eruption night and morning, and wash it off before each reapplication.

The preparations of mercury and sulphur, justly esteemed in the treatment of eczema, are most beneficial when the eruption is verging upon a cure, when the infiltration and exudation are gone, and the itching moderated.

Of the mercurials, citrine ointment is my favourite application, though the red and white precipitate ointments are perhaps equally useful, or the "Unguentum hydrargyri iodidi" of the London Pharmacopœia. These may be used of full strength or diluted with lard, and, if it is indicated, a few grains of cyanide of potassium may be added to allay the itching. If a lotion is preferred, from one to four grains of the bichloride of mercury may be dissolved with the aid of a little alcohol and mixed with an ounce of rose water, while a little dilute hydrocyanic acid may be added if necessary, the solution being rubbed into the part two or three times daily. In using mercurial preparations locally, you must always bear in mind the possibility of their being absorbed in sufficient quantity to produce salivation; hence you must be careful in anointing an extensive surface, and should warn the patient to discontinue the application if the gums become tender.

It was only the other day that I ordered a lotion of bichloride of mercury (gr.ij. to the ℥j. of water) to be applied to the nose of a lady, and in three days, to my astonishment, salivation had occurred. On the other hand, I have repeatedly ordered stronger lotions to be applied to extensive surfaces for weeks without the occurrence of the slightest tendency to salivation, thus showing the peculiarities of different constitutions.

Of the preparations of sulphur, the common sulphur ointment, of full strength or diluted, and with or without the addition of cyanide of potassium, forms a very useful application. In some cases you may add a little bicarbonate of potash with advantage (1) A drachm of sulphur mixed with an ounce of alcohol forms a capital lotion, but you must tell the patient to shake the bottle before pouring out the liquid, as the sulphur falls to the bottom. This should be rubbed firmly over the part night and morning and allowed to dry upon it. If the patient is drinking sulphur waters at Moffat, Harrogate, or elsewhere, and especially if the rash is on the decline, he may combine their external use with their internal administration in the shape of warm baths.

When an ointment is employed in the treatment of eczema, you must give full directions as to the manner of applying it. A very small quantity should be melted on the point of the finger, and rubbed firmly into the affected part, and none of it should be allowed to lie undissolved upon the skin, nor, in most instances, should its colour be perceptible after its application; the surface should merely have the appearance of having been recently moistened with pure water. The part should always be cleaned with soap and water before re-applying the ointment; for if you smear layer after layer of it upon the skin, it becomes rancid, acts as an irritant, and is calculated rather to be prejudicial than otherwise.

Astringents are of use in some cases of eczema, such as the sulphate of zinc or copper in proportions varying from three to twenty grains in an ounce of rose-water or solution of the diacetate of lead, diluted with distilled water, but I rarely have occasion to use them, and I think you will find them inferior to the remedies previously described.

For the purpose of curing a very mild, or preventing a threatened attack of eczema, or obviating the occurrence of an immediate relapse, the skin may be washed occasionally with soft soap and water. In private practice, you may recommend the use of Hendrie's "Dispensary Petroleum Soap," which is sold at sixpence per cake, and which is one of the most delightfully perfumed soaps with which I am acquainted.

The following case of eczema erythematodes is of value, as illustrative of many of the points of treatment to which I have adverted when the eruption covers an extensive surface:—

A gentleman from the West of Scotland, aged about 40, consulted me on November 9, 1861, about an eczematous eruption of great severity and of many weeks' duration. (He had one previous attack, which lasted three years.) The parts affected were the neck, lower part of the abdomen, inner aspects of the thighs, and the arms and legs, especially on the flexor surfaces of the elbows and knees. The eruption was bright red, and presented an erythematous surface, neither vesicles, pustules, nor papules being visible. There was no exudation from the abdomen or extremities. The skin of the neck, on the other hand, was much infiltrated, and from it serum exuded in abundance. The itching was severe. He was robust, without being corpulent, and, with the exception of the eruption, was in perfectly good health. He was ordered to rub the inflamed parts firmly morning and evening with a piece of flannel dipped in the following mixture:—

℞ Acidi Hydrocyanici, dil., ♏xl.
Saponis Viridis, ℥iss.
Aquæ, ℥iij.
Olei Rosmarini, ʒj.

Cold water was to be frequently dashed over the parts, five drops of Fowler's solution taken thrice daily after food, and a farinaceous diet recommended.

November 12.—No change. Local application omitted, being too weak. The whole eruption was painted with a solution of potassa fusa, (ʒss. to the ℥j. of water), which was washed off with cold water whenever the smarting became very severe. This was followed by the exudation of a considerable quantity of serum, especially from the neck. The patient was ordered to repeat this every two or three days, oftener or seldomer according to the severity of the application and the effect produced. The cold shower-bath was to be used twice daily, and the Fowler's solution to be continued.

In a letter, dated November 21, I was informed that the infiltration had quite disappeared from the arms, legs, and abdomen, and only some redness and itching remained. The infiltration, exudation, and itching of neck were much moderated. He was ordered to continue the potassa fusa solution to the neck, and the following mixture was to be rubbed firmly over the other parts night and morning:—

℞ Acidi Hydrocyanici, dil., ♏xl.
Olei Cadini, ℥j.
Saponis Viridis, ℥ij.
Olei Rosmarini, ʒiss.
Aquæ, ad., ℥v. M.

The Fowler's solution, which agreed, was to be increased to seven and a half drops thrice daily. The bowels and kidneys being torpid, a teaspoonful of a powder containing sulphur, magnesia, and bitartrate of potash, was to be taken at bed-time.

On December 6, patient stated:—"Since I last wrote, the complaint spread down the legs to the ankles. I have thus been affected from the ear to the foot, first and last. The strong application (potassa fusa, ʒss., aquæ, ℥j.) checked the inflammation, and no exudation took place." The previous eruption he stated to be rapidly disappearing under the influence of the local applications, although the itching was considerable at times.

On December 30, 1861, only a little roughness and very slight occasional itching of the skin remained. The following ointment was to be applied night and morning:—

℞ Cyanidi Potassii, gr. xii.
Unguenti Oxydi Zinci Benzoati,
Unguenti Citrini, āā. ℥j. M.

On January 9, 1862, the patient came to see me. The eruption was gone, and there was only a feeling as if the skin was not so elastic as natural. The local treatment was omitted, the dose of the Fowler's solution diminished to five drops thrice daily, and the purgative powder was only to be taken to relieve constipation.

January 1, 1863.—No return of the eruption. Treatment omitted ten months ago.

There can be no doubt that the local treatment was the most effectual in this case.

When the eczematous eruption occupies a limited extent of surface, it usually requires to be attacked by strong local applications, while it is not, as a rule, so much under the influence of internal medicine as when it covers a large area. In such cases, strong solutions of potassa fusa or chloride of zinc, or even these caustics in the solid form, may be employed locally in the manner and with the precautions previously described, and often with benefit; but you must remember to omit them whenever you have removed the infiltration of the skin.

Cauterisation with solid nitrate of silver may sometimes be resorted to instead of the above, or the tincture of iodine painted over the part night and morning, and a poultice of bread and hot water applied about once a week to remove the red skin which forms a covering to the eruption, and prevents the new layers of iodine from coming in contact with the disease itself. But of all the local means for the removal of limited eczematous eruptions, none are equal to blistering them. This may be done by means of a solution of bichloride of mercury (ʒj. to the ℥j. of alcohol), the fluid being painted over the eruption, and allowed to dry upon it. The action of the mercurial is, in this case, almost entirely local, and I have never witnessed any effect upon the system at large from its application.

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(1) ℞ Cyanidi Potassii, gr. v.
Sulphuris,
Bicarbonatis potassæ, āā ʒss.
Cochinillini, gr. i.
Axungiæ, ad. ℥j. M.

The best blistering agent, however, is the glacial acetum cantharidis—that is, acetum cantharidis prepared with glacial acetic acid—the ordinary solution of the Pharmacopœia being too weak. (k) It should be made in small quantities at a time, and kept in a good stoppered bottle, the stopper being removed for as short a time as possible, and, when not in use, covered with leather, otherwise its strength soon diminishes, and much annoyance is thereby occasioned. A little of this solution should be taken up by means of a paint-brush, and painted firmly over the part till it becomes perfectly white. If the fluid is of full strength, and the skin thin, as on the face, it usually blisters it at once; but if the opposite holds, and especially if the head or palms of the hands are to be blistered, it may require to be painted over them for several minutes. After the skin is *thoroughly whitened* a hot poultice may be applied to make the blister rise. One application is often sufficient to remove the eruption; but, if necessary, it may be repeated weekly, the crust produced by the previous eruption being softened with oil and removed before each re-application.

A couple of months ago, a gentleman, aged about 35, and otherwise in perfect health, consulted me with regard to an eczematous eruption on the head of twelve years' duration, for which he had been repeatedly shaved, and had consulted many Physicians of eminence. Tar had been applied to the scalp systematically for some time, and every conceivable ointment had been used, but without avail. After his hair was removed, I found that the disease corresponded to the form which I described to you under the name of eczema squamosum: it covered the whole head, and, as usually happens in these obstinate cases, was accurately limited to the hairy parts. The scales on the surface were numerous, the itching severe, and, on the crown, front, and sides of the head, the infiltration and redness of the skin were great. I blistered these parts with glacial acetum cantharidis, the fluid requiring to be painted on for some minutes, owing to the thickness of the skin, and ordered the rest of the scalp, which was less severely affected, to be painted with tincture of iodine morning and evening. In a fortnight the iodine was omitted, and when the crusts and scales produced by the iodine and the blistering fluid were removed, the scalp appeared perfectly healthy and without a vestige of the previous eruption. To consolidate the cure, however, tincture of iodine was painted over the whole head night and morning for a fortnight, and, when the red skin was removed, the scalp looked remarkably well, there being not even the vestige of a scale, which can rarely be said even of the head of a healthy person. No other treatment was resorted to, and the gentleman has since been in America. In the interval his hair grew in greater force than ever, and he is delighted to be rid of his old and indefatigable enemy.

Many cases such as these might be mentioned, but I shall just refer to one more, which many of you had an opportunity of seeing:—A woman, pretty well advanced in years, came to the Dispensary a few months ago, to get advice about an eczematous eruption of old standing, which covered the whole of the palmar surface of each hand. She had likewise a tendency to eczema of the leg, which was removed by means of the "tinctura saponis viridis cum pice," a preparation previously referred to. It is of the hands, however, I wish to speak. The eruption here assumed that form which I described to you as eczema rimosum, the fissures being very numerous and deep, and the infiltration of the skin great. Itching was mingled with the pain, but the latter, on account of the fissures, predominated. Owing to the pain and stiffness, the hands were kept constantly in a semi-closed position, and she was unable to use them. I blistered each hand with the glacial acetum cantharidis, which had a marvellous effect. The eruption disappeared completely, and the patient returned with joy depicted in her countenance, and opened and closed her hands with perfect facility, not unmingled with pride.

(k) This solution is made at the New Apothecaries' Company, 67, Glassford-street, and at Fraser and Green's, 118, Buchanan-street, and [illegible], [illegible]-street, Glasgow.

ORIGINAL COMMUNICATIONS.

◆

CLINICAL MIDWIFERY.

By FRANCIS H. RAMSBOTHAM, M.D.

Physician-Accoucheur to the London Hospital, etc.

(Continued from page 478.)

It occurred to me to be obliged to induce labour prematurely six times during the five years from January 1, 1840, to December 31, 1844.

Premature Labour induced by Ergot.

Case 202.—On May 10, 1840, Mrs. B., living in Spitalfields, being about seven and a-half months advanced in pregnancy, commenced taking an infusion of ergot for the purpose of inducing premature labour, in consequence of possessing a small pelvis. She was a patient of the Royal Maternity Charity. My father had brought on labour for her twice before, one of which children was living. The uterus began to act in the night. At 2 p.m. on the 11th, the os uteri was dilated to the size of half-a-crown, sufficiently so as to admit two fingers easily, and was very soft. The head was presenting. She had then taken four doses. I separated the membranes from the cervix all around as high as I could reach, and made some efforts to dilate the os uteri to a further degree. At 9.30 p.m. the membranes protruded externally, and broke spontaneously. The midwife whose care she was under called on me at 11 p.m. to say that she could not make out the presentation. As I had clearly and unmistakably felt the head presenting at two o'clock on the same day, I was not a little surprised, and returned with her to the patient's house. I found the right shoulder at the brim, and the funis prolapsed. I could not feel any pulsation in the funis, and therefore thought the child dead. There had been little or no pains since the membranes broke, and without much difficulty I passed my hand into the uterus, laid hold of the right leg, brought it down, and turned the child. It soon breathed and was restored. The placenta came down almost immediately, and she quickly recovered. On January 16, 1843, she came to my house four and a-half months advanced again in pregnancy. Both her children were then living. N.B.—It may appear that I was mistaken in my diagnosis in this case as far as the presentation was concerned, and that the fœtus had originally presented with the shoulder; but I am quite sure I was not; and such a change in labour from the head to the shoulder has been observed by other Practitioners. For instance, Denman says (ch. xiv., sect. 8):—"Having been called to women at the beginning of labour, and finding by an examination that the *head* of the child presented, I have left them for several hours till the first changes were naturally made. When I have examined them on my return, I have found the *arm* of the child presenting, the head being departed out of my reach. I do not know that any practical advantage is to be obtained by a knowledge of these cases; but it is remarkable that the accident has always happened to women who were deformed." As, indeed, was the case here.

Premature Labour induced by Ergot—Craniotomy.

Case 203.—In the morning of August 5, 1840, Mrs. I. A., Hornsey-lane, Holloway, began to take ergot (half a drachm infused for half an hour) for the purpose of inducing premature labour, being seven and a-half months advanced in her third pregnancy. Her pelvis did not measure more than two and three-quarter inches in the conjugate diameter. I had delivered her by craniotomy in 1838, and brought on premature labour on June 15, 1839. The child presented with the feet, and was born dead. She was of a very scrofulous habit, and had for years been the subject of glandular abscesses in different parts of the body. I saw her at 4.15 on the 6th. She had left off the medicine the evening before, having only taken three doses, in consequence of its having induced uterine action in the course of the afternoon. When I arrived the os uteri was dilated to the size of half-a-crown, and the uterus was acting every half hour. I passed my finger all round within the cervix, and separated the membranes as high as I could. She took half her former dose of ergot at 5, and another half at 11 p.m. I was called to her at 3 a.m. on the 7th. The os uteri was then almost entirely dilated, and the membranes were still entire. Between 5 and 6 a.m. she began to complain of a violent pain in the region of the diaphragm near the scrobiculus cordis; I therefore ruptured the membranes; a very large quantity of liquor amnii came away, and the spasms ceased. At 9 the head was well engaged in the pelvic brim, and the pains were regular and strong; at 11 it had come down partly into the cavity, though still too high for me to feel an ear. It remained quite stationary until 2.30, during all which time the pains were strong and forcing; I then applied the long forceps very satisfactorily, but I could not make the least impression on the head. At 4 the pulse had risen to 130 in the minute; the skin was hot and dry; she began to talk incoherently, and her countenance was much distressed. In her first labour also she had become delirious before I operated. I therefore at once perforated the skull, and delivered in half an hour. The placenta did not descend, and I removed it from the uterus by introducing the hand; I found it adherent. She gradually recovered, and was restored to her former state of health.

Premature Labour induced by Ergot.

Case 204.—On June 20, 1842, at noon, Mrs. S., Shoreditch, a patient of the Royal Maternity Charity, began to take the infusion of ergot to induce premature labour, in consequence of her pelvis not measuring more in the conjugate diameter than two and a-half inches. I had twice delivered her by craniotomy. She was not more than seven months advanced. When I saw her on the 21st, at 1.30, she said pains followed the first dose, and were increased after each dose she swallowed. She had then taken five. The os uteri would admit the tips of two fingers, though it was rather rigid; the head was presenting; she continued to take the medicine every four hours. At 3 p.m. on the 22nd the pains were forcing; at 7 p.m. the membranes broke spontaneously, and the child was born living at 8.15. She recovered well, and nursed her infant, which I saw thriving on May 3, 1844.

Premature Labour induced by Ergot.

Case 205.—On March 24, 1843, Mrs. B., the subject of the Case 202, just detailed, again began to take the infusion of ergot every four hours to induce labour prematurely. The uterus began to act in the early part of the night. At 5 p.m. on the 25th, she had taken five doses. The os uteri was then dilated to the size of half-a-crown, and was soft. The uterus was acting every fifteen minutes; the head presented. She took another dose of the medicine, and the pains became increased greatly after that, both in frequency and power. At 4 a.m. on the 26th, the membranes broke spontaneously before the midwife arrived. The child was born at 5, alive. She had not quite reached seven and a-half months. She recovered favourably, and nursed her infant.

Premature Labour induced by Ergot.

Case 206.—Mrs. J., whom I delivered by craniotomy on April 17, 1843, the subject of Case 133, previously reported, commenced taking the infusion of ergot to induce premature labour on March 23, 1844, being nearly eight months advanced. She took it for two days and nights every four hours, with very little effect; for although she had experienced some regular pains since midday of the 24th, still the os uteri was quite close. I therefore punctured the membranes with my sheathed stilette at 3 p.m. of the 25th, and discontinued the medicine, considering her insusceptible to its peculiar action. The uterus did not begin to act at all strongly till the 28th, about 8 a.m. The os uteri dilated very slowly indeed. At 12 p.m. the head was being urged forcibly against it, the pains being very strong. Its diameter at that time did not exceed the size of a crown piece, and it was still rigid. However, it rapidly opened from that period, and the child was born at 1, a boy, living, who is now growing into a fine young man. The head was much elongated and misshapen, showing that it had suffered considerable pressure. The placenta passed in ten minutes; in fifteen minutes after she had rather a severe rigor, but that passed away, and she did well. I have brought on premature labour once more for this lady, the only time she has been pregnant since. That child is also now living, and is a strong and intelligent youth.

Premature Labour induced by Ergot.

Case 207.—On May 31, Mrs. S., in Shoreditch, the subject of the Case 204, again began to take infused ergot as before, to bring on premature labour, being seven months gone in pregnancy. It did not act so expeditiously as before, for she continued to take a dose every four hours till June 3, in the middle of which day the os uteri easily admitted the extremities of two fingers, and I could distinguish the head presenting. I therefore ruptured the membranes, and desired her to leave off the medicine. Although she had been in pain occasionally since she first took the ergot, the uterus did not begin to act powerfully until 8 p.m. on the 7th, and she was delivered of a live child at 2 a.m. of the 8th. She called on me, again pregnant, on June 29, 1846, when both her children were alive and thriving.

Premature Labour—Breech.

Case 208.—On May 28, 1842, Mrs. C., Mile-end New Town, who possessed a pelvis of about two and three-quarter inches in the conjugate diameter at the brim, and for whom I was about to bring on labour prematurely in a day or two, was seized with parturient pains spontaneously at the end of seven months. I was called to her at 9 p.m. The os uteri was then dilated to the size of half-a-crown, and the breech presented. The pains were very trifling, and continued so till midnight of the 29th. I was called to her at 3 a.m. of the 30th. The uterus was then acting strongly and frequently. The membranes soon broke, and as the breech did not descend through the brim, in about two hours I applied the blunt-hook over the bend of one thigh, and soon extracted the trunk and arms; but the head gave me much trouble; however, the child was born living; the placenta was speedily expelled, and she did well.

N.B. The first time I attended this woman I was called in consultation in August, 1833; that was her first labour, and the child presented transversely. I could not pass my hand into the uterus to turn, and was obliged to exviscerate the fœtus. Since that time I have brought on premature labour for her six times, each time by the aid of ergot only; all these children presented with the head; three were alive, three dead. On one occasion she only took three doses of ergot, on another four.

Five of the above-recorded cases prove indisputably that the ergot possesses the power of originating uterine contractions, and inducing labour, *ab initio*, towards the close of pregnancy; and it has occurred to me to witness many others in which that same power was manifested with equal clearness. In one of these six, indeed, it signally failed to produce the effect for which it was exhibited. It is not easy to determine why such a failure should have occurred in this as well as some other instances which I have seen. Perhaps the drug was not fresh, for it soon deteriorates by keeping, or perhaps the patient's constitution was not susceptible to its action; for as we know some persons are not susceptible to the peculiar action of mercury and other drugs, we may safely infer that there are others not susceptible to the peculiar action of ergot.

The incautious administration of this medicine to anticipate the proper time of labour is not without its dangers, for I am fully convinced that, if taken by the mother for a lengthened period, it has a destructive influence over the fœtus in utero, provided only it produces its specific effect upon the mother; and the following, among other reasons, has induced me to form that opinion. One of the most prominent symptoms of ergot-poisoning is convulsive action, which generally precedes death. Now, almost every woman who has expelled a dead child while under my care, after ergot had been given for a lengthened period, has explained that she was sensible of a series of violent movements on the part of her fœtus, which ended in a state of perfect tranquillity, and this was never again disturbed. Besides this, five children born alive under my notice, where many doses of ergot had been given, died soon after birth in convulsions. It is so rare for infants a few hours old to perish by convulsions in this climate, that we cannot help attributing these casualties to the agency of the drug. I am equally convinced, also, that no effect at all is produced upon the fœtus, however large may be the quantity of the medicine swallowed by the mother, provided it does not occasion uterine contractions; for some patients of my own have taken between thirty and forty doses without the child suffering in the least degree, as far as could be perceived, yet in no case where I have administered it, either where it has produced labour or not,—whether the infant was born living or dead, or died soon after birth,—has the mother's health been at all deranged by the drug. These considerations of the danger the child encounters have induced me to follow a modified practice of late years in the exhibition of ergot to produce labour. I now never give more than six or eight doses. If the os uteri is opening, and pains are following each other regularly, I leave off the medicine and either rupture the membranes, or more frequently leave the case to proceed uninterfered with; if, on the contrary, no effect is produced on the os uteri, I consider the drug inert in regard to that patient's constitution, and putting it entirely to one side, I at once puncture the membranes by means of my sheathed stilette. I would refer the reader to a table of fifty-five cases in which I have given ergot to produce premature labour, published in this Journal on January 7, 1854. He will there see the number of doses taken by each patient, and the leading features of each case.

8, Portman-square.

(To be continued.)

CASE OF

PARALYSIE MUSCULAIRE ATROPHIQUE SUCCESSFULLY TREATED BY IODIDE OF POTASSIUM.

By F. TAYLOR, M.R.C.S., L.M., L.R.C.P. Lond.

J. B., aged 25 years, a strong, healthy-looking man, who had scarcely known a day's illness, applied to me on February 18, 1863, complaining of loss of power in the feet, which, in the course of two days, had extended as far as the knees. So great was the muscular paralysis, that he felt totally unable to work, and from this time was confined to the house; the weakness rapidly increased, so that by February 21 he had lost the entire power of moving either leg, and was compelled to be carried from the chair to the bed, and, in whatever position his legs were placed, there they remained until his attendants changed them.

February 22.—Felt the loss of power greater than ever.

23rd.—Complained of feeling no use in the fingers, with very little power in the fore-arms.

24th.—Had very little power of moving the arms at all, it having extended up to the shoulders.

25th.—Could not move his arms or fingers in the least.

From this time the muscular paralysis had not only extended to both extremities, but the facial muscles had become partially so, and were agitated with a fibrillary quivering or tremor, such as would be produced by a succession of mild electric shocks, yet I could not detect any muscular quivering in either the upper or lower extremities; he also complained of slight numbness in the facial muscles, but not in any other part. There was great muscular atrophy in both the upper and lower extremities; the power of articulation, deglutition, and respiration was perfect, sensation being developed to its highest degree. He could feel the least touch or breath of air; had no pain; and, to make use of his own words, "felt as well as ever he did in his life, but had not the slightest power of moving his arms or legs in any degree." He had the entire control over the bladder and sphincter ani; the bowels acting regularly most days, no alteration took place (he being carried about and fed like a child) until March 14, when symptoms of bronchitis set in,—not an uncommon occurrence at the termination of these cases. All hope of my patient's recovery had now vanished; but, pleasing to say, under the usual treatment this bronchial affection got quite under control.

The treatment I adopted in this case, up to the appearance of the symptoms of the attack of bronchitis, was a generous diet, occasional purgatives of calomel and jalap, with stimulating embrocations to the extremities, and tonics, together with a succession of blisters to the spine, through the lumbar and dorsal regions. I continued this treatment up to April 8 without the slightest improvement whatever. I resolved then to try the power of the iodide of potassium in doses of five grains three times a-day, which proved most effectual, for upon visiting him one morning, a few days after he commenced taking it (April 12), I was pleased to hear him say he thought he had a little power of moving his fingers, and that his hands felt stronger; but so slight was the improvement, that I could not really perceive any change, but, upon seeing him two days after (April 14), he had a decided power of moving them.

On the 15th said he was better, and I could detect that he had evidently more power of moving the hands than he had the day previously.

16th.—I found he could slightly raise his hands. Upon asking him to take hold of my hand, I felt he could grasp a little, and about this date he began to have slight movement in the feet.

18th.—I found him still improving, so that he could slightly raise his arms and could grasp my hand tolerably firm, had also more power in his legs, and could slightly draw them up.

20th.—Was pleased to find he had more use in both the upper and lower extremities, and could raise his arms and legs tolerably well.

He went on improving rapidly every day, and by the 26th could manage to sit up for a few hours; during this time I continued the same treatment with the iodide of potassium, and at the expiration of a few more days he had so much improved that he could by the aid of two sticks walk across the room, and has now got the entire use of his limbs, and feels as well as ever he did in his life, and can stand a good hard day's work.

My object in publishing this case is to show the unmistakable benefit that was derived from the use of the iodide of potassium, which in many instances reported proved ineffectual, but in a case which I saw some years ago, somewhat similar, but of a more trifling nature, it answered extremely well after trying strychnia, nux vomica, setons, etc., all without effect.

Upon inquiry into the history of this man's past life, I found he had been a most temperate liver, scarcely ever having been the worse for drink; kept good hours; no smoker. Nor could I trace that he had weakened his constitution by self-abuse, which might account for this muscular paralysis. He had no tenderness over the spine, and, as I have said before, was perfectly free from pain in every part; but his distressed state of mind was so great at being in this perfectly helpless condition, that it was painful to be with him. He had not been subject to cold, nor had he been employed among mercurial, lead, or other poisons, but was in the habit of doing excessively hard work, and this I think may account in some measure for his sufferings.

Woodstock, June 12.

ON THE

USE OF CITRATE OF AMMONIA IN CASES OF IRRITABLE BLADDER, WITH URINE OF LOW SPECIFIC GRAVITY.

By R. H. MEADE, F.R.C.S.
Surgeon to the Bradford Infirmary.

SOME of the most troublesome cases of irritation of the bladder that come under the notice of the Surgeon are those dependent upon disease of the kidney; the vesical pain and irritability arising from the altered state of the urinary secretion. I do not here allude to those forms of functional disorder, where different kinds of sand or gravel are secreted; but more especially to those cases in which the urine is of low specific gravity and deficient in urea; the accustomed stimulus of which seems to be missed by the bladder. Among these many cases of Bright's disease may be classed, in which the first symptoms that excite the patient's attention, and are present for weeks or months before other indications of disease are noticed, are pain in micturition, with a too frequent desire to empty the bladder.

All forms of irritable bladder are difficult to relieve, unless the cause can be removed, and, as this is not always practicable, any remedies that have been found useful are worth recording. The root of *Triticum repens* has been recommended by Mr. Henry Thompson in some cases, but for several years I have found more relief, in the forms of disease to which I have briefly alluded, from the citrate of ammonia than from any other medicine. My attention was first directed to it by the treatise on stomach and renal diseases of the late Dr. Prout, in which he recommended it as a good diaphoretic in some forms or stages of Bright's disease. Finding that it relieved the irritability of the bladder, which existed in some of the cases of albuminous urine in which I prescribed it, I tried it especially in cases where this symptom was very prominent, and frequently found it successful in its removal or alleviation. I have sometimes combined it with infusion of buchu or tincture of henbane, but though these or other remedies may sometimes increase its efficacy, I often find as much benefit from its use when it is given by itself.

The form in which I prescribe it is one drachm of sesquicarbonate of ammonia with one drachm and fifteen grains of citric acid, mixed with six ounces of water. An ounce of this mixture to be taken three or four times in the day.

With regard to the *modus operandi* of the remedy, I beg to quote the following extract from Dr. Prout's work (it occurs in the form of a note at the bottom of page 95 of the fifth edition):—"I have reason to believe (he says) that when large quantities of the citrate (and perhaps other salts) of ammonia are taken by dyspeptic patients, it is sometimes converted into urea. The greatest excess of urea I ever saw occurred in the urine of a dyspeptic hypochondriac, who was in the habit of taking large quantities of the citrate of ammonia. On leaving off the ammoniacal salt, the quantity of urea immediately became and continued normal."

Should the remark made in this extract, which has only lately fallen under my notice, be correct, it is only in cases where there is a deficiency of urea that the citrate of ammonia will be beneficial; and as far as my experience goes, this is the fact. I always prescribe it in cases of irritable bladder, where the urine is of low specific gravity. Too many of these cases occur in connexion with serious organic disease of the kidneys, where palliation of the symptoms is all that can be hoped for; but I have seen remarkable improvement of the health take place under a steady use of this remedy for some time, where chronic desquamative nephritis, or even suppurative inflammation of the pelvis of the kidney, had been going on for many months.

We occasionally meet with a case of irritable bladder (of course I exclude here cases of hysteria) in which the general health appears pretty good, and where the only apparent disorder of the urine is an increase in its quantity, with a constant lowness of its specific gravity, from a deficiency of urea. In these cases the urine may be kept a considerable time without becoming at all fœtid, and is destitute of the usual urinous smell when first passed. I think with Dr. Prout that this affection mostly terminates in organic disease of the kidney, or rather is the first stage of it. One well-marked case of this description which came under my care after various remedies (for the relief of the vesical irritation) had been tried by several Medical men, yielded almost immediately to the citrate of ammonia.

I may remark, in conclusion, that it is curious to find that while so able a Physician as Dr. Prout should have noticed so remarkable a fact, in his chapter on disorders of the urine, accompanied with excess of urea, as the excessive formation of urea in cases where large quantities of citrate of ammonia had been taken, he should not have turned it to a practical account, and recommended the same thing as a remedy in other cases where there is a deficiency of urea.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

GUY'S HOSPITAL.

CASE OF ABSCESS IN THE LEFT HEMISPHERE OF THE BRAIN, OPENING INTO THE LATERAL VENTRICLE.

(Under the care of Dr. GULL.)

It is well known that there may be extensive disease of one hemisphere of the brain, not only without paralysis, but even without apparent loss of mental power. In the following case the abscess had destroyed a considerable amount of nervous tissue, and had evidently existed some time, but, as Dr. Wilks remarked, it was no doubt on the extension of the disease to the bodies in the floor of the lateral ventricle that the hemiplegic symptoms came on. A case similar in this respect is recorded in the Hospital Reports of this Journal for February 23, 1861.

It is well known that hemiplegia is found associated with disease on the surface of the opposite hemisphere of the brain. But the probability is that the paralysis is due, not to the apparent disease on the surface, but to some secondary affection of the motor tract in relation with it—the corpus striatum or thalamus opticus. Just as, after injury to the spinal cord in the artificial production of epilepsy in guinea pigs, disease extends to the medulla oblongata, so we may imagine that it may extend from the hemispheres to the motor tract of the limbs. There may be considerable disease of nervous tissue, with no obvious change in appearance to the naked eye. Mr. Lockhart Clarke has repeatedly found disease in a spinal cord by microscopical examination, which to ordinary examination appeared healthy. In cases of hemiplegia from disease of the surface of the brain, the corpus striatum and thalamus opticus ought to be examined microscopically, even when there is no softening or effusion of blood. It is supposed by physiologists that the motor fibres do not pass higher than the corpus striatum, and, if so, of course paralysis cannot result from disease of the hemispheres. If they did pass higher, there would be hemiplegia in cases of tumour and abscess affecting the cerebral lobes; but it is well known that a patient may die suddenly (having had no paralytic symptoms during life) and a tumour be found in one hemisphere, or, as in the following case, there may be an abscess in the hemisphere, with no marked symptoms, until hemiplegia results from rupture and extension into one of the lateral ventricles.

This subject has indirectly a Surgical bearing. The onset of hemiplegia, after injuries to the head, is one reason for trephining the skull on the side opposite to the paralysis, in order to remove blood or pus which may be causing pressure on the brain. Now, of course it is of great practical importance to ascertain whether the paralysis be due to the disease on the surface, or to some secondary or coincident change in deeper parts. At a recent meeting of the Pathological Society, in reference to this subject, Dr. Wilks said that he had never, in cases of hemiplegia after injury to the head, failed to find softening of the corpus striatum or thalamus opticus. So that if the Surgeon removes the pus or blood from the surface of the brain, he does not alter the conditions producing the hemiplegia. Dr. Wilks of course excepted those cases in which there was so large a quantity of blood or pus that the pressure would secondarily press on the deeper parts. If there is no hemiplegia from disease, as abscess, in the hemisphere, it seems unlikely that it should result from disease on its surface, unless we suppose that the paralysis is reflex.

There was a peculiarity in the following case, viz., that no disease of the bones or membranes was discoverable. Dr. Wilks holds that there is no such thing as primary abscess of the brain. We know that it generally results from caries of one of the cranial bones, but there was no such cause in this case. It is a rare exception to the rule.

Robert F., aged 35, was admitted June 10. He had led a very irregular life, and thus no good history was ascertainable. He had been injured in an accident some years ago. His chest was said to have been bruised, and after the injury he spat blood; but there was no evidence that he had either then or at any other time had any injury to the head. In fact, all that could be learned as to his previous health was that he had had fainting fits. He was said to have been well until three days before admission, when he was seized with tingling and numbness in the left hand. This increased, and weakness came on until his admission, when it was seen that there was much loss of power in the left arm and leg. For the last week of his life he was completely hemiplegic in the left side, and it was also observed that he had twitching movements of the right side. He subsequently fell into an insensible condition, with difficult respiration, and death occurred on the 27th.

Autopsy by Dr. Wilks.—On removing the dura mater, the whole surface of the arachnoid was seen to be slightly greasy and opaque, and the middle of the left hemisphere was of a slight greenish hue, and towards the middle line was a small patch of lymph. On touching this part, fluctuation was felt, indicating the presence of fluid within. This had enlarged the size of the right hemisphere, and encroached on the left, which was depressed in consequence. On making a section, a large abscess was found, the size of a hen's egg, extending from without to within. The matter had a very disagreeable odour, and was of a greenish colour, and was viscid. The walls of the abscess were circumscribed, indicating that the abscess was at least some weeks old. By careful dissection, a tolerably thick layer of lymph, forming the wall, could be removed, but there was no spontaneous separation, as is sometimes seen. Towards the inner side the abscess had encroached on the thalamus, and subsequently made its way into the ventricle. On opening the ventricles, the left was found full of natural fluid, but the right contained some pus. This was seen oozing through the walls externally, where the brain structure was very soft. A careful examination was made of the external parts, as the membranes and bone, but no disease could be discovered. The calvaria was unequally thickened in parts, as if an ostitis might have occurred at some previous time, but no caries was discoverable.

The other organs were healthy, except that, from the mode of death, the lungs were much congested.

Dr. Wilks adds: Thus looking at the brain, it would seem as if the abscess had been of some little duration, and when it involved the central parts, the symptoms above related came on, ending in coma when the ventricles were involved.

HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

CASE OF HYDRO-PNEUMOTHORAX—RECOVERY.

Henry M., aged 26, admitted into the Victoria Park Hospital on March 22, 1862. He had been ailing with cough and expectoration for eighteen months, and about two months before his admission into the Hospital he had an attack of pleurisy with which he was entirely laid by. He had also several times had slight hæmoptysis, but he did not appear to have any family predisposition to phthisis.

When admitted he was somewhat emaciated, the respiration was slightly hurried on exertion; he had but little cough or expectoration; the pulse was frequent and feeble. In the first fortnight he improved, gaining 2 lbs. in weight, but had then a slight attack of diarrhœa, which somewhat reduced him. On May 6 he had a recurrence of the diarrhœa, with sickness and vomiting, and feverish symptoms, pain in the left side of the chest, and difficulty of breathing. For this a blister was applied, and was followed by warm poultices. On the 9th he was much prostrated, had pain in the left side, and had more cough and expectoration, and could not lie on the right side without increasing them. Some abnormal resonance was detected in the higher situation in the left side, with dulness in the lower, and the levels of the two changed with the changes in the patient's position. There was also some fulness and tenderness over the seventh intercostal space, as if the empyema was threatening to burst in that space. This subsided under the application of poultices, but the evidences of air and fluid in the left pleura became more decided. The left side was expanded and invariable, morbidly resonant in the upper and dull in the lower parts, and the heart was displaced to the right, and there was an absence of the respiratory sounds in the clear parts with some metallic tinkling. The right side was fully expanded, and moved freely, and the respiratory sounds were loud. On May 23 the splashing sound was very distinctly heard when he moved himself, and he complained of the unpleasant sensation of water moving in the chest when he changed his position. Upon the whole, though he varied considerably, he improved from this time, gaining strength and suffering less in the cough and expectoration. On July 28 the side had to a considerable extent contracted, and the signs of air in the pleura were less marked, but he still felt the movement of water in the chest, and occasionally the splashing sound. The heart remained displaced to the right. He resided in the country, and was now and then allowed to return home. During the time he had been in the Hospital he had taken the cinchona and acid, quinine and iron, and cod-liver oil, with anodynes for the relief of the cough, and had had blisters, poultices, and tincture of iodine applied externally.

After discharge he continued the same treatment, and attended at the Hospital from time to time. On November 14 he had gained flesh and strength, and had but little dyspnœa, cough, or expectoration. His pulse was 72, and respirations 24 in the minute. There was still some abnormally clear resonance in the upper and dulness in the lower parts, and he could feel and render audible the splashing in the pleura.

On January 23, 1863, he had still further improved. He had gained flesh and strength; had no cough or expectoration. The left side was contracted, and the resonance on percussion everywhere deficient. His respiration had returned more or less completely, and the succussion sound could not be detected. The heart was still displaced to the right, and the right side of the chest was enlarged. He had resumed his work, and was apparently quite well.

ST. THOMAS'S HOSPITAL.

CASE OF RECOVERY AFTER HYDRO-PNEUMOTHORAX.

(Under the care of Dr. Peacock.)

Jeremiah F., aged 19, a ship scraper, was admitted into King's Ward, St. Thomas's Hospital, on November 29, 1861.

He stated that about a fortnight after the last Christmas he was taken with inflammation of the side, and was admitted shortly after into St. Thomas's, under the care of Dr. Barker. After being in the Hospital about two months, he was tapped in the side, and four and a-half pints of fluid were removed. About a month after this he was discharged from the Hospital cured, and continued tolerably well till a fortnight before his re-admission.

When admitted under the care of Dr. Peacock, in November, 1861, he had difficulty of breathing, cough, and expectoration; his tongue was furred, and somewhat dry; his pulse feeble, and 92 in the minute. On examining his chest the right side was found fully expanded, and freely movable. The left, on the contrary, was contracted above, but somewhat expanded below. In the upper parts, when raised, the resonance on percussion was abnormally clear, and below entirely dull, and the relative levels of clearness and dulness varied with the changes in the position of the patient. In both the clear and dull parts the respiratory sounds were absent. The patient complained that when he lay down he felt the sensation of water rushing over the chest, and by shaking himself he produced a loud succussion sound. The heart was displaced to the right, being situated behind the lower part of the sternum, and to the right side of that bone.

He was directed to take the cinchona and acid mixture, with compound tincture of camphor and cod-liver oil, and was directed to have the compound tincture of iodide applied freely over the left side.

On December 16 he began to spit blood, and subsequently expectorated a considerable quantity.

On the 26th the hæmoptysis being entirely gone, and the side not having been materially improved, he was directed to take small doses of the iodide of potassium and of liquor potassæ in decoction of bark, and the doses of the iodide were gradually increased.

Under this treatment, with the steady application of the tincture of iodine externally, and the employment of cod-liver oil, his general condition improved, the side underwent gradual contraction, and the evidences of the presence of air and fluid in the pleura subsided.

On February 2 the abnormal resonance and succussion sound had entirely disappeared. The side was contracted in all its dimensions; there was general dulness on percussion, but a return of respiration everywhere except in the lower lateral region, where the dulness was complete, and there was pleural subcrepitation; the heart, however, still retained its position behind the lower part of the sternum. The patient, considering himself quite well, went out of his own accord on February 26, in the state mentioned.

MEATH HOSPITAL, DUBLIN.

CASE OF APHONIA CURED BY THE APPLICATION OF ELECTRICITY TO THE VOCAL CORDS.

(Under the care of Dr. Stokes.)

The electricity was applied to the vocal cords by means of Dr. Morell Mackenzie's instrument, described in the last volume of this Journal, p. 184.

Ellen B., aged 46, a laundress, was admitted into the Hospital on April 30, with complete aphonia of some weeks' standing. The patient had suffered great privations, having been constantly overworked, and exposed to wet and cold. She had had a cough for a year, and about three months before her admission she was suddenly seized with hæmoptysis. The spitting of blood lasted for about a week, the mouth filling with dark-coloured blood six or seven times a day.

Previously to this, that is to say, in September, 1862, she had suffered from enlargement of the thyroid gland, accompanied with strong pulsation of the vessels of the neck, and some difficulty of swallowing. This condition lasted for about three months.

There was no perceptible difference in the percussion sounds over the right and left lungs. The respiration was loud over the left side of the thorax in front, with a slight rustling sound under the clavicle; on the right side of the chest it was more feeble, and attended with confused muco-crepitating râles. The heart sounds were strongly marked. Dr. Stokes remarked that, "notwithstanding the physical *signs*, the *symptoms* of phthisis were entirely wanting in this case. There was no hectic, the pulse was quiet, and the patient did not present a phthisical appearance." On making a laryngoscopic examination, the parts presented a perfectly healthy appearance, the colour was natural, and there was no abnormal swelling. When the patient was directed to say "eh," the vocal cords did not act; in fact, they could scarcely be distinguished, and the sound produced was a mere hiss.

May 7.—Dr. P. C. Smyly applied the electric current to the vocal cords by means of Dr. Morell Mackenzie's "laryngeal galvaniser."

8th.—A stronger current was passed in the same direction, *i.e.*, from the arytenoids to the front of the thyroid cartilage. After this application the patient could sound her voice, but a considerable exertion was necessary.

9th.—The electricity was again applied as before; the voice became perfectly natural, and feminine in tone.

12th.—There was slight hoarseness of the voice. When examined with the laryngoscope, the vocal cords were seen to be of a pearly white colour, and to approximate closely in phonation. The current was again passed, with the effect of completely removing the hoarseness.

June 17.—The voice still continued natural.

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Medical Times and Gazette.

SATURDAY, JULY 11.

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POPULAR MEDICAL ERRORS.

POPULAR errors of the present day, on matters connected with Medicine, are well worthy of passing consideration. By "popular," we mean the more common errors which we encounter in our intercourse with ordinary society, not those grosser delusions, prejudices, and superstitions which still linger in nooks and corners of old England, but are too exceptional to possess interest except for the Medical antiquarian. The former have so wide a prevalence and (many of them) so pernicious a tendency, that it becomes the interest as well as the duty of every Medical Practitioner to do his utmost to expose them and check their spread. It is his interest, because, in treating disease, they are some of the most vexatious obstacles he has to encounter; his duty, because, until the science of life and health is made part of popular education, the public are mainly dependent upon our Profession for enlightenment in all matters affecting their bodily welfare.

Our own observation inclines us to believe that the majority of popular errors, which we shall presently mention, are shared by even the best educated classes to a much greater extent than is usually imagined. And the reason is not far to seek. Except in the case of gross superstitions and palpable absurdities, even educated people are incompetent to judge of the truth or falsehood of the popular Medical creed, unless they know something of the laws of life and health. A knowledge of these laws does not come to a man intuitively, nor by any amount of classical, mathematical, or metaphysical training. It is gained only by special study of physiology and hygiene,—subjects which have hitherto rarely formed part of English education. Again, though an average acquaintance with these subjects would prove a safeguard against most of the errors we are about to notice, there are yet many which would need for their detection knowledge more strictly Medical than the mere lay-student would ever be likely to attain. Reserving for future consideration the subject of popular Medical *superstitions*, we will first notice some of the chief popular Medical *errors*, meaning thereby mistakes arising either from imperfect or erroneous apprehension of Medical and hygienic truths. And, first, let us take some of those which concern infancy and childhood.

Certain diseases are generally supposed to be the inevitable lot of children. Most parents think that their children "are born to have measles, hooping-cough, perhaps even scarlet fever, just as they are born to cut their teeth, if they live." (a) That the majority of children *do* have at any rate the first two of these diseases (and that a respectable percentage of them die in consequence) is a fact; but that children *must* have these diseases we know to be an assumption, and a very false one too. Children catch these diseases simply because parents and guardians do not observe those sanitary precautions which will guard them against the contagion. What those sanitary precautions are, no one has shown more clearly and forcibly than that lady whose words we have just quoted.

Speaking of teething, this reminds us of another popular error. Parents anticipate this period as one apt to be accompanied with more or less suffering, and even danger for their children. So far they are right. But when, as is usually the case, they regard the process of dentition as the *cause* of the diseases and derangements which may happen to co-exist with it, they are wrong. It is not so much their cause as their occasion. Teething children are peculiarly subject to these diseases and derangements, not because their teeth are piercing their gums, but because the period of teething is one of active growth and development, and therefore of peculiar susceptibility to disturbing causes.

Children of tender years, and even tender constitutions, are sometimes made to rough it, as the saying is,—*i.e.*, to endure exposure to cold, etc., more or less inadequately clad,—under the impression that they will thereby grow up all the hardier and stronger. The mistake is a cruel one, and apt to tell most injuriously on the child's health and strength. It generally arises from ignorance of the comparatively small power which children have of resisting cold,—in other words, of maintaining an independent temperature. Such a system of child-nurture, if universally adopted and pushed to an extreme, would perhaps not be without its advantages. While the feeble and sickly would generally die, the strong and healthy alone would generally survive; and thus, in the course of a generation or two, supposing the usual conditions of health to be observed, Englishmen would attain a high degree of physical vigour. Perhaps the fondest dreams of the muscular Christian would be soberly realised. The old Romans tried the experiment, and their poets were for ever harping upon the *durum a stirpe genus*, which was the result. Of course, the means whereby the result was attained never struck them as savouring somewhat of barbarity. Statistics of child mortality were not kept in those good old times.

Another great physiological truth, ignorance or disregard of which is sure to entail bad consequences, is the necessity for children (and adults as well) of a diet always wholesome, but still not too monotonous. Some parents try to rear their children on what they fancy to be a faultless diet. They allow them plenty of bread, milk, butter, meat, and potatoes, but rigidly withhold "trash," such as pickles and sweets of all kinds, perhaps even fresh fruits and green vegetables. For a time this diet answers well enough, but by and by, to their surprise, their children, so far from thriving better, thrive worse than those who have been allowed to eat and drink pretty much what they like. Their diet, in so far as it contained a due proportion of nitrogenous, non-nitrogenous, and inorganic principles, was wholesome enough; but, inasmuch as persistence in it did not afford that *variety* of aliment necessary to healthy nutrition, it became positively unwholesome. Dyspeptics and valetudinarians often make the same mistake, and with the same result. They over-diet themselves, lose flesh, get costive bowels, and become hypochondriacal to the last degree.

(a) Miss Nightingale's "Notes on Nursing," p. 20, 1st Ed.

There is a host of popular fallacies about different medicinal remedies. We shall consider merely a few of the more important. Camphor and fumigations, such as pastilles, burnt vinegar, the smoke of tobacco, and even of brown paper, still enjoy great repute as deodorisers and disinfectants. The public do not appreciate, first, that such remedies as these do not destroy (*i.e.*, chemically decompose) a smell or miasm, but merely overpower and mask it; secondly, that even those remedies which *do*, such as charcoal, chlorine, etc., are at best mere makeshifts, the only way to maintain a pure atmosphere being free ventilation and removal of the *cause* of the smell as well as of the smell itself. Such new-fangled doctrines run counter to long-established customs. They are inconvenient truths which rich and poor alike are slow to believe, slower still to act upon. Literally as well as metaphorically, people prefer the time-honoured maxim of not stirring stinks. A stink is a nasty thing to have to remove, and the task of its removal is by no means sweetened by the uncomfortable reflection that the nuisance was (most likely) wholly preventible.

Probably no class of remedies is so much abused, in the etymological sense of the word, as aperients. One great cause of this, undoubtedly, is the popular belief, or rather assumption, that a person ought never to go more than a day without having his bowels opened. This may be true in a general way, but it is equally true that all people's intestinal machinery is not "set" to act at the same interval. In different persons, and in the same persons under different circumstances, the intervals may and do vary within somewhat wide limits consistently with perfect health; and (in the absence of some special reason) it is meddlesome interference with nature to try, by artificial means, to quicken the time of their recurrence. A disbelief in mild aperients, and a prejudice in favour of a good strong griping purge, are very common, especially among the agricultural poor. The *dura messorum ilia* are made of leathery stuff. Boucolos has no faith in an aperient which does not "touch him up" rather sharply. It is with his food as with his physic. A toughish beefsteak is more to his liking than the undercut of a sirloin. The poor, again, rarely patronise a fluid medicine, be it orthodox or quack, unless, besides giving sensible evidence of its action, it has plenty of colour and taste.

The vulgar notion that Chalybeate medicines cause caries of the teeth sometimes proves a nuisance when we want our patient to continue their use. He is taking steel, and his teeth are "going"—conclusive evidence to his mind that the steel is destroying his teeth. He suspects us of refining when we try to make him understand that the caries of his teeth depends not upon the medicine but upon the defective nutrition which it is intended to remedy. The prejudice against calomel, or mercury in any form, on the ground that it ruins the teeth, is much stronger, though scarcely better founded, than the prejudice against steel. A cachectic child, with occasional attacks of gastric derangement, is ordered occasional and appropriate doses of calomel; at the same time its teeth happen to be "going"—just as they "go" in similarly ill-conditioned children who may have never taken a grain of calomel at all. Mamma and nurse, as a matter of course, denounce the calomel as the cause of the caries, blame the doctor for prescribing it, then perhaps take the child to some ill-educated dentist, who is pretty sure to confirm their groundless and unjust assumption. Or again, perhaps (a most improbable supposition) the calomel has been really abused, and given to such an extent that the gums have sloughed, the teeth loosened, and some of them even dropped out. Surely here, they will say, is pretty conclusive evidence that calomel *does* ruin the teeth. But the truth is, that these teeth are not necessarily unsound. Often they are not decayed at all. They get loose and drop out, just as they do in old age, because there is not gum-substance enough to hold them in—with this difference, however, that the loss of support is due in old age to atrophy; in over-salivation to actual destruction of the gum-substance. That calomel, if given in requisite quantity, will cause salivation, and that in profuse salivation teeth are apt to be lost, no one can be foolish enough to deny: we simply maintain that in the loss of the teeth calomel has by no means that direct agency which is popularly attributed to it. (b)

A predilection for remedies compounded of dung and various abominations is nearly, but not quite extinct. Within the last two years a member of our Royal College of Physicians went to the length of publishing a book to enlighten the world on the beneficial effects of serpents' excrement in phthisis. Human urine and mother's milk are still much used by the poor in infantile ophthalmia. Some years ago the fertile brain of a certain Captain Acherley conceived the idea that mother's milk would be a good remedy for making old men young again. What so likely to re-invigorate second childhood as the fountain of life which Nature provides for the first? Acting upon this conviction, he set up an establishment where sapless old debauchees could imbibe rejuvenescence from the breasts of plump young matrons. The Captain's scheme, we believe, made too great a scandal for its merits to be fairly tested.

(To be continued.)

THE WEEK.

THE LATE COLLEGE ELECTION.

The late election at the Royal College of Surgeons was a triumph, although not without cost. A most conscientious, accurate, and business-like member, Mr. Cæsar Hawkins, has been displaced, than whom no public servant ever did his work more thoroughly. Yet there is no help for this. Had King Solomon and Aristides the Just been turned out, and three barber's blocks or figures stuffed with straw been put into their places it had been well. In all revolutions some good men are massacred, and some worthless ones promoted; and the College of Surgeons is undergoing a revolution. The knell of fate has sounded for the old system of misrule. It is in itself a most gratuitous and mischievous absurdity that a set of educated men like the Fellows of the Royal College of Surgeons should know absolutely nothing of their own affairs, and have no voice in their management, except the annual privilege of electing representatives so-called, who give no account of their stewardship. It is degrading that Englishmen of any profession should consent to truckle to irresponsible government. It is a mischievous thing that the main body of a profession should consent to the domination of a few. These things

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(b.) We beg to refer our readers to a leading article, entitled "Nihilism," in the *Medical Times and Gazette* for August 3, 1861, where we considered at some length the popular prejudice against calomel and other so-called "unnatural" drugs.

must and will be altered. The men who propose to come forward for the honours of the Council must condescend to solicit the suffrages of their constituents and to enlighten them as to their policy. Whatever is worth having is worth the asking, and if men are too fastidious to bear the annoyance of an election they are obviously unfit for public life. The Fellows must follow up the blow. Indeed, they are not likely to be idle for the future. Then we shall see the end of these miserable "Regulations," which are framed to give a monopoly to London schools, and we shall cease to hear of students who "grind for the College," lest their anatomy and physiology should be too new to be acceptable to examiners who have not followed the Greek adage about learning as they grow old.

TESTIMONIAL TO MR. SPENCER WELLS.

In another column will be found an account of the presentation of a very gratifying testimonial to Mr. Spencer Wells. To have conducted a Medical journal for seven years, and to retire from it with the respect and goodwill of the leading members of the Profession, is a distinction in itself.

PHYSICIANS AT DERBY.

The Derby people are in a dilemma; they want a Physician to their Infirmary, and cannot get one. Advertisements have failed to attract a Physician; therefore it is determined to elect a General Practitioner to do the Physician's work at the Infirmary; although in the event of a future vacancy preference will be given to a Physician, should one come forward. "Hospitals," said Dr. W. Ogle at this meeting, "are supplementary institutions; supplementary to the parish system, to the club, to the Dispensary, and to general practice amongst the working classes. The Hospital, is in fact, the poor man's opportunity for obtaining a consultation." As regards the work to be done, it seems that "each Physician had under his care 527 out-patients and 227 in-patients;" whilst each Surgeon "had but 150 out-patients and 163 in-patients." It does not appear that any salary is attached to the office of Physician; and it seems true, likewise, that there is a decay in the habit of calling in Physicians in consultation at Derby, so that there is little prospect of indirect remuneration. If, then, the Derby people expect to get a man of superior education to spend the best years of his life in a drudgery to supplement the defects of present systems for affording relief to the poor, they must either be mad themselves, or expect to catch a madman. We only hope that the General Practitioners will not tamely put up with the insult offered to them in this proposition, that they shall be stop-gaps "till a Physician offers himself." The Poor-Law system is bad enough, but this would make them Poor-Law Doctors without Poor-Law pay.

PARLIAMENTARY.

On Thursday, July 4, the Earl of Ellenborough, on the occasion of presenting a petition to the House of Lords from the officers of the late East India Company's naval and military services, complaining of their grievances, and asking for an inquiry, limited his remarks chiefly to the wrongs of the officers of the Indian navy. He alluded incidentally to the claims of the Medical branch of the Company's naval service, and bore testimony to its value. We heartily wish that Parliament would interfere to redress the grievances, of the Medical officers of the army in India. The amalgamation of the Queen's and the Indian services has told most heavily against the Medical department of the latter. That department was composed of men who, having accepted India as the country in which the active part of their lives and their best energies were to be spent, devoted themselves to the study of the peculiarities of Indian service, the diseases of the country, and the languages of its people under a stimulus which can never be brought to bear on an Assistant-Surgeon of a Queen's regiment, who merely goes there for a few years. Yet this class of officers, a class *sui generis*, which, when once lost, cannot be easily replaced, is now being rapidly and systematically got rid of—the seniors quietly shelved, and the juniors alienated by finding themselves amalgamated in name only, but not in reality, with the Medical service of the Queen's army in other parts of the world. In spite of promises made and pledges given to the contrary, the pay, rank, and privileges conferred by the Royal Warrant have not as yet been extended to the country where Government has probably been under higher obligations to its Medical officers than in any other part of the Queen's dominions.

The relief of the country from the monstrous incubus of the Great Exhibition building marked the same evening as a red-letter night in the House of Commons. It is useless to speculate as to the future of the seventeen acres, whose purchase the House appears now to have had sufficient leisure to repent. It is to be hoped that even yet there is some chance of a respite of the sentence of banishment that had gone forth against the scientific collections of the British Museum.

Mr. Bentinck gave notice that he intended to call the attention of the House to the frequency of railway accidents, and to move that it is the duty of the Government to legislate for their prevention.

On Friday, in the House of Lords, the principal matter debated was the removal of subscription required for academical degrees at Oxford. The bearing of the question on other professions than that of divinity was incidentally alluded to by Earl Russell:—

> "The persons who take the degree of Master of Arts may become clergymen, but they may become barristers, Physicians, or civil engineers, and what can be the use of the test in any other profession except the Church? In the University of Cambridge these requirements are not made."

In the House of Commons, Mr. Caird's motion for a Committee to inquire into the growth of cotton in India, led to a long debate on the question of the propriety of Government interference for the purpose of increasing its cultivation. The great obstacle to the complete success of the Indian cotton trade has hitherto been the want of roads and means of conveyance from the plantations to the place of shipment. This fact was insisted on by Dr. Forbes Watson several years before the American civil war shut up the mills of Lancashire. Sir Charles Wood acknowledged that it is to India this country must look in future for its chief supply of cotton, and that Government are bound to improve the communications between the plantations and the seaboard. But beyond this they will not go; not even an indulgence proffered by the apostles of Free Trade is sufficient to induce them to violate the law of "supply regulated by demand."

On Monday Lord Raynham gave notice of his intention to move for leave to introduce a bill to regulate the hours of labour of persons engaged in the millinery business, and to establish provisions for the proper ventilation of the rooms in which they are employed.

The Vaccination (Scotland) Bill was read a third time and passed.

The only subject of any social or professional interest discussed on Tuesday was in connexion with Mr. Cochrane's motion for a reconstitution of the Board of Works. Although the motion was lost by a large majority, it gave the mover an opportunity for a trenchant speech on the management of public buildings and works. Amongst others, Burlington House did not escape. It appears that the Scientific Muse, represented by the Royal, the Linnean, the Geological, and Chemical Societies, is somewhat expensively lodged there, for the building and gardens cost the nation no less than £160,000. How vastly more attainable for the people of London would the Natural History Collections of the British Museum be at Burlington House than buried in an extramural cemetery at Kensington!

On Wednesday, the Poisoned Grain Prohibition Bill was read a second time. The destruction of small birds has been checked in Germany and France, but in England the indiscriminate use of poisoned grain is exterminating them even more rapidly than the "sparrow clubs," the result being an enormous increase of insect life, and the ruin of crops thereby. Another evil is the fact known to toxicologists that the flesh of game and poultry fed on arsenical grain has been found to produce symptoms of poisoning in persons who have eaten it. The Bill is to be restricted to the prohibition of spreading poisoned grain on the ground; the clauses which interfere with the sale of poisons and the use of arsenic in sheep-washing and *bonâ fide* agricultural purposes are to be struck out.

Lord Raynham's Casual Poor Bill, the object of which was to provide Asylums for the reception of vagrants in the Metropolitan districts, and his Bill for the Protection of Domestic Servants and Apprentices were withdrawn.

NEW TREATMENT OF EPILEPSY.

We have received a copy of a pamphlet printed for private circulation amongst the leading members of the Profession, announcing a new method of treatment of epilepsy and some other diseases, "founded on the discovery of the vaso-motor functions of the sympathetic nerve." Our readers are doubtless familiar with the intensely interesting discovery of Claude Bernard, that there is a system of vaso-motor nerves, and that by exciting these nerves (or by galvanism) the arteries are made to contract, whilst by diminishing the influence of these nerves, the arteries dilate, as those of the face do after section of the cervical sympathetic. Now, we believe M. Brown-Séquard's theory of epilepsy is, that the fit is preceded by irritation of those branches of the sympathetic nerve which supply the head. Hence the paleness of the face, which is visible; and hence a contraction of the cerebral blood-vessels, and temporary deprivation of arterial blood to the brain, which is assumed with no small probability to deprive the brain of its functions. The desideratum is, how to exert "a curative influence, not only over the spinal cord, including the medulla oblongata, but also over the sympathetic nervous system, to the extent of the distribution of the vaso-motor nerves throughout the encephalon?" In like manner, "to cure paralysis, primarily originating in a lesion of the spinal cord, it is necessary to exert a curative influence, not only over the spinal cord, but also over the sympathetic nervous system to the extent of the distribution of its vaso-motor nerves throughout the paralysed limb." With regard to epilepsy, few persons will deny that down to the present hour at least 90 per cent. of decided cases defy treatment. Next to the disease itself nothing can be more conducive to human unhappiness than the treatment. Ten closely-printed pages of Copland's Dictionary are occupied by a bare enumeration of "remedies and means of cure recommended by authors," most of which have doubtless been followed by cure in a few cases, although it is next to impossible to trace any rational connection between the remedy and cure, or to predict results of treatment in any given case. At the present day we believe that the system pursued is one which may be called tentative therapeutics, experimental medication, philosophical empiricism, or blind drugging, as you please. Patients are subjected to the influence of powerful drugs, in turn, such as the iodide and bromide of potassium, belladonna, ergot of rye, etc., etc., with some obscure hope that the intention of the prescriber may be fulfilled in the dilatation of some vessels and the contraction of others. The writer of the pamphlet before us—Dr. John Chapman—asserts that he is able so to control the action of the vaso-motor nerves as to diminish or prevent, or even cure, certain forms of epilepsy and paralysis. The means employed are simple—mere cold and heat, applied in various ways and during different lengths of time, separately, alternately, or combined. An old remedy, it may be said, in itself, but most undoubtedly the author may claim it as a new one in the intention, and method, and results. Of course, it is the results by which it must be judged. We believe that a certain number of beds in a large London Hospital will be devoted to a practical working out of Dr. Chapman's treatment. If successful, he will be voted a great benefactor; if not, he must collapse.

FROM ABROAD—THIRTY-EIGHTH MEETING OF GERMAN NATURALISTS—PROFESSOR SCANZONI—DECOMPOSITION OF WATER WITHIN THE ANIMAL FRAME—VENICE AS A SEA-BATHING RESORT—OFFICIAL BULLETINS—ELASTIC LIGATURE FOR TUMOURS.

Those of our readers who may be travelling in Germany during the ensuing autumn may spend some pleasant days at Stettin (about seventy miles from Berlin), where the German Naturalists and Physicians will hold their thirty-eighth meeting, from September 18 to 21. A hearty welcome is promised to all labourers in the vineyard of Natural Science. Inquiries may be addressed to Drs. Dohrn and Behm, the managers of the congress, Stettin.

Scanzoni, the celebrated Obstetrical Professor at Würzburg, having received a "call" from another University, the King of Bavaria, at the request of a numerously-signed petition, wrote him an autograph letter requesting him to remain at Würzburg, with the understanding that the theoretical portion of his course of lectures should be delivered by his assistant, Dr. Von Franque. In the mean time the renowned accoucheur has received a call of another kind from the Empress of Russia, he being engaged to attend her in her confinement.

At a recent meeting of the Munich Academy of Sciences, Baron Liebig announced what he regarded as a very important discovery. The atmospheric air has hitherto been regarded as the chief or only source of the oxygen employed in the processes of nutrition and metamorphosis within the animal organism. By the aid of an apparatus, for which King Max provided 7000 florins from his private purse, it has now been shown that, within the bodies of carnivora, a very considerable amount of oxygen is produced from water; and that, under given circumstances, a powerful process of decomposition is set up, resolving the water into its constituent parts, its oxygen serving for the formation of carbonic acid, and the nitrogen (which often exceeds the volume of the animal in quantity) being discharged by expiration.

The Austrian empire, so rich in mineral waters and spas, has no place of resort for sea-bathing; but an attempt is now being made on a large scale to convert Venice into such. Its capabilities seem great, and it unites various attractions for visitors, while it is easily reached from all parts of Austria. The enterprise is not a Government undertaking, but a private one, set on foot by Signor Fasola and Dr. Jungh, of Venice.

A writer in one of the German weeklies animadverts with some justice on the contradictory characters and general worthlessness of the bulletins issued by the Medical attendants of royal and distinguished persons. It ought not to be a difficult matter to give in a couple of lines a sufficiently accurate statement of the patient's case, with some attempt at exactitude in prognosis. The bulletins which were issued during the fatal illness of Prince Albert sufficiently prove that we can claim no superiority over our continental *confrères* in the construction of this species of State document. The immediate occasion of the remarks in question was the fatal illness of Maximilian, Grand Duke of Este, an old man of eighty-one, who had been long sinking from incurable disease, but the precise condition of whose health it seems to have been thought desirable for some reason to mystify. At eight o'clock on the 1st of June, his Medical advisers declared to the public that he was enjoying a tranquil sleep, the symptoms of his disease having abated; and in less than two hours afterwards they announced that he had died suddenly from paralysis of the heart. This "paralysis of the heart" forms a convenient cloak for many a false diagnosis and prognosis. In this case it may explain the death, but it is no indication of the disease; it is a catastrophe, but not a diagnosis.

M. Adolphe Richard, at the recommendation of M. Trousseau, has recently been experimenting on the removal of pediculated tumours and analogous growths by the employment of an elastic ligature, formed of a caoutchouc thread. In the seventeen cases in which he has employed it, it has answered its purpose admirably, and he considers it as very preferable to the ordinary ligature. Its action is more continuous, and never ceases until the end to be attained is accomplished, while the pain after a few hours is insignificant, and the healing process afterwards is a very rapid one.

TESTIMONIAL TO MR. SPENCER WELLS.

On the 1st of this month a very handsome silver candelabrum, valued at £114, was presented to Mr. Spencer Wells at a meeting attended by a considerable number of the contributors to the testimonial. The following address, written by Dr. Conolly, was read :—

"The friends who have the pleasure to present the accompanying testimonial to you are influenced not only by sincere personal regard, but by a desire to express their estimation of your long-continued services in the editorship of the *Medical Times and Gazette*. They are strongly impressed with a sense of the importance of the duties of an editor of a Medical journal, and of the influence of the periodical press on the Medical Profession in general. The judicious and impartial selection of facts and observations, from whatever honourable quarter proceeding, the liberal appreciation of the literary efforts of Medical writers, the direction of the public mind on questions interesting in regard to the public health or in relation to Medical jurisprudence, and the promotion of the general interests of the Medical Profession, and of good and kind feelings among its members, are among the objects requiring the constant and vigilant attention of an Editor, and their performance demands high qualifications of intellect, and a disposition to promote whatever is true and whatever is useful. His duty scarcely less requires a courageous determination to discountenance whatever is mean, and pretentious, and valueless. We are convinced that views of this character have animated you throughout your Editorial labours ; and it affords us much gratification thus to record the expression of our respect, and to express our continued good wishes for your Professional success and your happiness."

Mr. Wells, in reply, said that when he heard, soon after his retirement from the editorship of the *Medical Times and Gazette*, that some of his friends wished to present him with some testimonial of their regard, he was naturally very much gratified, but he expressed his strong desire that the testimonial should be in no respect a public one. He knew that the practice of presenting public testimonials to private persons had become absurdly common during the last few years. He thought that expressions of public gratitude should be reserved for great public benefactors ; but he also felt that if gentlemen who had been associated with him as contributors to the Journal which he had edited for more than seven years were kind enough to present him with some permanent record of their regard, he might accept their good-will offering, not only without impropriety, but with pride and great satisfaction. And when he found that 110 gentlemen, not one of whom had been asked to contribute to this testimonial, and without the publication of a single advertisement, but simply on receiving from one or two of his friends an intimation that there was an opportunity of joining in it if they wished to do so—gentlemen holding the very highest rank in the Profession (for he saw on the list such names as Clark and Jenner, the confidential advisers of the Sovereign ; such representatives of the Profession in London as Adams, Alison, Bennet, Bowman, Budd, Druitt, Fergusson, Holt, Leared, Priestley, Ramsbotham, Richardson, and Tuke—such of our brethren in the provinces as Conolly and Bucknill ; Bardsley, Roberton, and Whitehead, of Manchester ; Symonds, of Clifton ; Gray, Rolleston, and Symonds, of Oxford ; Barclay, of Leicester ; Teale, of Leeds—such names among our Scotch and Irish brethren as Adams, Buchanan, Laycock, Macleod, Mackenzie, Pirrie, and Simpson ; such representatives of the Army Medical Department as the late Director-General Sir Andrew Smith, his successor Dr. Gibson, with many other friends in that and the sister service ; while Aitken, Longmore, and Parkes appeared among the Professors of the New Army Medical School ; and last, not least, he saw the name of his old master, Sadler, of Barnsley, representing a friendship of nearly thirty years' duration), he felt that such a testimonial from such men was indeed to be prized and handed down to his children as a most honourable heir-loom. The value of the gift was greatly increased by the address which accompanied it—and the value of the address was very greatly increased by the fact that it was written by one so much loved and revered by his brethren as his kind friend Dr. Conolly. Mr. Wells also expressed the hope that this would not be the last testimonial to a Medical editor. Few who had not tried had any idea of the amount of labour and anxiety involved in the literary management of a weekly journal ; yet there was no labour so generally ill-rewarded, or so often followed by the reverse of reward. If some such tokens of approval were a little more frequent there would be more encouragement for men of ability and high character to undertake the heavy responsibilities and anxious cares of journalism.

The testimonial, as we stated, is a massive candelabrum, of solid silver, and on the base is the following inscription, also from the pen of Dr. Conolly :—

PRESENTED TO
THOMAS SPENCER WELLS, F.R.C.S.,
by 110 Contributors and Subscribers to the
Medical Times and Gazette,
On his retirement from the Editorship,
1862,
As a testimony of their estimation of
His Services to Medical Science,
and of
His Honourable Character.

LOCAL REPORTS ON SMALL-POX.

(Continued from page 618.)

XXII. *The Recent Small-Pox Epidemic in Edinburgh. Being Notes from an Essay Read before the Hunterian Medical Society.* By J. Parker Crossby.

In preparing this essay at the commencement of the year, advantage was taken of my position at the time of resident clinical clerk in the Royal Infirmary, under Dr. Sanders, to investigate the subject practically ; and having obtained the sanction of the Medical officers, I was enabled, with the valuable assistance of Drs. Sanders, Smart, Frazer, and Middleton, to go thoroughly into all the cases which had been treated in the Infirmary, and to draw up several statistical tables of great interest.

The total number of cases under observation was 350, admitted between August and February, during which six months the disease may be considered epidemic. A few sporadic cases have occurred since that time. The disease was at its height in November and December, as is seen in the following table :—

	Males.	Females.	Recovered.	Died.
Admitted in August, 1862.	3	2	5	0
,, September, ,,	9	12	18	3
,, October, ,,	26	22	42	6
,, November, ,,	66	38	88	16
,, December ,,	60	57	104	13
,, January, 1863.	25	30	48	7
Total	189	161	305	45
	350		350	

In reference to admissions according to age and sex I have drawn up the following tables :—

	Males.	Females.	Total.
Under 1 year	4	3	7
1 year and under 5 . .	13	13	26
5 ,, ,, 10 . .	13	20	33
10 ,, ,, 15 . .	12	22	34

	Males.	Females.	Total.
15 years and under 20 . .	32	34	66
20 ,, ,, 25 . .	68	38	106
25 ,, ,, 30 . .	30	22	52
30 ,, ,, 35 . .	4	2	6
35 ,, ,, 40 . .	7	5	12
40 ,, ,, 45 . .	3	1	4
45 ,, ,, 50 . .	3	1	4

The youngest patient was two months and the oldest 50 years, but it must be remembered that, owing to the reluctance of mothers to send their children to the Infirmary, and in the early stage to the want of accommodation, a very small proportion of the numbers afflicted were seen.

The most common age seems to be between 20 and 25, comprising chiefly servants from all parts of the town. Sex does not appear to have much influence.

Many of the cases were of the mildest description, and not a few the very extreme in severity. So far as a record has been kept the numbers were—

Confluent	66
Semi-confluent	20
Descrete	143
Unknown	121
	350

The mortality was 45 in 350, or 1 in $7\frac{7}{9}$, divided as follows with regard to age:—

		Gregory.
Under 5 years .	10 in 33, or 31 per cent.	42 per cent.
From 5 to 10 .	4 in 33, or 12 ,,	24 ,,
,, 10 to 15 .	1 in 34, or 3 ,,	19 ,,
,, 15 to 20 :	6 in 66, or 9 ,,	24 ,,
,, 20 to 30 .	18 in 158, or 10 ,,	34 ,,
,, 30 to 40 .	2 in 18, or 11 ,,	46½ ,,
,, 40 to 50 .	4 in 8, or 50 ,,	58 ,,

I have added, by way of contrast, Dr. Gregory's percentage in a previous epidemic. 26 males died, and 19 females. The usual day on which death occurred was from the eighth to the twelfth.

With reference to vaccination, I have obtained a somewhat accurate statement. I have entered all as vaccinated in whom a cicatrix was found, although many of them were very imperfect, and a few had been done recently—perhaps after the disease was taken:—

	Vacc.	Not.	Doubtful.
Of 7 admitted under 1 year .	0	7	0
,, 26 from 1 year to 5 . .	6	20	0
,, 33 ,, 5 ,, 10 . .	14	19	0
,, 34 ,, 10 ,, 15 . .	18	15	1
,, 66 ,, 15 ,, 20 . .	42	17	7
,, 106 ,, 20 ,, 25 . .	68	29	9
,, 52 ,, 25 ,, 30 . .	37	12	3
,, 6 ,, 30 ,, 35 . .	5	1	0
,, 12 ,, 35 ,, 40 . .	10	2	0
,, 4 ,, 40 ,, 45 . .	3	1	0
,, 4 ,, 45 ,, 50 . .	3	1	0
Total . .	206	124	20

In three patients there was pitting from a previous attack of the disease. Not one had been re-vaccinated. Of the 206 vaccinated, only 4 died, or 1 in 51½; and in three at least of these there was a serious complication, to which, probably, we may refer the cause of death; one delirium tremens; a second puerperal mania; and the third, an old woman of 50, acute bronchitis. Of the 124 unvaccinated, 41 died, or 1 in 3.

So that, although vaccination did not prevent in many cases the disease being taken, still it had a great effect with regard to the mortality; and it must be noticed that even a previous attack of small-pox is not always a sure preventative against a second attack. Many, too, who alleged vaccination, and even had a mark on their arm, had been done very imperfectly. I am of opinion that the more pustules we produce the more secure do we make our patients, and that we should never make less than two in each arm. There seems every reason to suppose that after puberty the system becomes much changed, and hence the value and importance of re-vaccination, which is, I think, the only sure preventative.

Several incidents have presented themselves which are deserving of notice here. A good number of the cases were attended by a degree of sore-throat, often of some severity, not due to any œdema, but coming on often before the eruption appeared, and resembling that of scarlatina; probably the two diseases may have co-existed. It was noticed that on the anterior surface of the body—both trunk and extremities—the eruption was much less marked than on the posterior; but as our attention was only called to this fact during the few last cases under treatment, sufficient opportunity was not given us to come to any definite conclusion. For the same reason, I am unable to say with any degree of certainty whether any weight can be given to the observation that a warm plaster or blister applied to any part of the body has a tendency to draw the eruption to that part. If this be so, does it not suggest the possibility, by an application of this kind, to draw the disease to some unimportant (so far as personal appearance goes) part, and thus avoid any pitting in the face, etc. A few cases of the hæmorrhagic form have been noticed. In one poor girl it was most excessive, principally from the toes. A few pregnant women have been under treatment, and in one abortion was produced by the severity of the disease, the child being covered with pustules. In the others there was no such result, and I have been at considerable trouble in looking after these and some who were not in the Infirmary—about ten in all—and in no case have I been able to trace the slightest appearance of the fœtus having been affected, and in one case the child was vaccinated at the usual time after, with perfect success; so that, so far as my experience goes, I must support the negative side of this disputed question.

With reference to treatment, this has been of the simplest kind. The acetate of ammonia and morphia have been our chief drugs, and wine and brandy were freely given when indicated. The sarracenea purpurea has had a fair trial, but it had not the slightest effect, and was given up as entirely useless.

In conclusion, I would now refer to the subject of prevention of pitting which has lately been discussed both in the Medical and non-Medical Journals. Several plans were tried, such as calamine, collodion, glycerine, etc., but none found so effectual as that discovered by Dr. Smart. This has certainly all the good properties ascribed to it by that gentleman. This is a subject which is, however, far from settled, so many cases come before us where no pitting at all could be observed, so that in those cases where these things were tried, though the desired result was produced, it might have been so had no application been used. Dr. John Duncan, resident Surgeon to Professor Syme, happened to have a case where small-pox appeared three days after an amputation of the thigh, when it was not considered safe to move him. In this case Dr. Duncan applied the composition on one side of the face only, but no pitting was found on either side, so the composition could have been no use.

REVIEWS.

Illustrations of Puerperal Diseases. By R. Uvedale West, M.D., Vice-President of the Obstetrical Society of London. Second Edition. Post 8vo. London: Churchill and Sons. 1862.

Medical and meteorological phenomena are strictly analogous in respect of the complexity of the causes which produce them, and it is only by means of exact observation, extended and applied to every variation of every extrinsical and intrinsical circumstance, that we may hope to get at their prime causes, and thus be enabled to work out their explanation. Two classes of works are therefore especially commendable: those which simply record observed facts and their attendant circumstances, and those which, in collecting facts, attempt their proper collocation and generalisation. Dr. West's work properly belongs to the former class, but, as it contains theories and conclusions of its own, we must consider it in reference to both. It professes to be the "embodiment of a twenty-eight years' experience of puerperal diseases," and is composed of narratives of select cases from the author's practice, loosely connected and arranged in groups, which are concluded by brief generalisations. The first 150 pages (Part I.) describe the several varieties of puerperal fevers as manifested by certain particular symptoms, such, for example, as "cerebral excitement and disorders of the mind;" diarrhœa, etc.; the remaining 50 pages (Part II.) refer in the same manner to non-febrile diseases, and certain miscellaneous affections occurring in the puerperal state.

As the intrinsic value of all such works as Dr. West's depends upon a clear conception of the facts narrated, and of their relation to each other, and to subsidiary phenomena, so their practical utility chiefly depends upon the perspicuity with which these facts are arranged and recorded. Nothing will more conduce to the advancement of Medical knowledge than such efforts as Dr. West's, who deserves immense credit for the labour to which he has thus devoted what other men call leisure; and it is a matter of much regret that our Professional brethren should so rarely follow his example and give the results of their long observation to the world.

At the risk, perhaps, of being thought hypercritical, we propose, with a view of encouraging and facilitating such labours, and of increasing their value, to point out what we consider to be defects in the work before us; and we do this with the less reluctance, since Dr. West's book has received, and deservedly so, the most favourable notice in several of the Medical periodicals. His reputation is so fully established that we shall treat his book freely, and point out the *maculæ* which are detectable amidst its great excellences, without the compunction which we should feel in criticising the work of a feebler man.

An improvement might be effected in the narration of some of the cases, the chief points of which are so obscured by needless daily detail that we lose sight of them, unless, indeed, we use strained attention, before we come to the end of the story. The author, too, is often guilty of wide digressions. Cases 3 and 71 are marked examples of both faults. In the narration of cases, it should be a rule, discarding all mention of the days of the month, to specify the days of the disease instead. If this were done we should not be troubled to calculate the day on which a given symptom appeared, and at the end of the history would be recorded its duration.

On the other hand, the brevity with which the symptoms are recorded in some other cases renders them of comparatively less value than they deserve. Thus case 76 is headed "Chronic Bronchitis," and all the chest symptoms related of this fatal case are the following:—"She had suffered from bronchitis for several months, the disease having become considerably aggravated as winter advanced. On the fifth day (after labour) after over-exerting her lungs with talking, she was taken worse, with an aggravation of the cough and hectic symptoms; she finally sank." We suspect that symptoms indicative of greater mischief than chronic bronchitis lurked within hearing here.

In grouping a series of observations, the least that we may expect from an author is that he should give us some general indications of the cause of the symptoms recorded, by adopting some simple and intelligible classification. But, excepting perhaps group B, there is no attempt at anything of the kind; and while undue prominence is given to the symptoms, the anatomical characters, and local complications of the disease are either altogether left out of consideration, or only very cursorily noticed. The author goes so far in one case as to regard two totally unrelated symptoms as cause and effect of each other; he says, page 7, "Phlegmasia dolens may therefore be looked upon as one of the possible sequelæ of convulsions."

Dr. West adopts the theory of M. Cazeaux, thus quoted in the preface, "There is, in lying-in women, a great morbid aptitude, which I will at once call a *pyogenic state*, which not only manifests itself in abdominal phlegmasies, but makes its sad influence felt whatever be the disease attacking the puerperal female."

This theory receives the following practical adaptation:—Speaking of "Diarrhœa as a variety of Puerperal Fever," Dr. West says, "It is worthy of remark that diarrhœa was either a prominent symptom, or was itself the disease in most of the cases above given, in which a natural cure took place by means of an escape of purulent matter. Is it not possible that a similar elimination of *materies morbi* in puerperal diarrhœas may sometimes take place without being detected, the pus escaping from the rectum?"

Again:—"In case 11 there was purulent expectoration with hectic fever prior to, or coincident with, the final elimination of the offending material by means of the abscess in the calf of the leg. In case 17 there was cough, with purulent expectoration, going on for several weeks, while the breast was discharging pus. In both cases, doubtless, the purulent expectoration was subsidiary, as an eliminating process, to the evacuation of the materies morbi, from the leg in the former case, from the mamma in the latter; these was purulent disease *in*, not *of*, the lungs, the purulent expectoration being merely a salutary outlet for an offending material."—Pp. 41 and 44.

If we had any doubt of the meaning of the theory propounded by M. Cazeaux, it is cleared away by Dr. West's practical application of it. Given its full significance, the theory stands thus: The blood of pregnant women is predisposed to suppuration, and when this occurs the pus may be *eliminated* by the lungs, the mucous membrane of the intestines, etc., and this condition of the blood causes the various manifestations of puerperal fever, such, for example, as metritis, convulsions, phlebitis.

Begging as it does the whole question of the cause of pyæmia, the adoption of this theory would necessarily result in a practice different from that which the pathology of puerperal fever suggests, and which modern experience of the disease dictates. If the prime cause of puerperal fever never reside in the uterus, and if metritis and its involved phlebitis be but a mere effect of a "pyogenic state," then, indeed, attention to this organ—insuring its firm contraction, emptying it of clots, preventing putrescible matter from lodging, and septic agents from reaching it—with a view of anticipating or of arresting the disease, is unnecessary. We cannot, however, adopt this theory, and we think that Dr. West has signally failed to substantiate it.

The question as to disease *in*, and not *of* the lungs goes for nothing. Pneumonia was clearly present in one case, as, indeed, Dr. West informs us, and its presence in the other may be inferred from the symptoms narrated; and with regard to the diarrhœa, it is nowhere demonstrated that pus formed any part of the evacuations.

The author does not attempt any simplification of the nomenclature of disease. Under the title "Intestinal Fever," which is now commonly considered to be synonymous with typhoid fever, he describes three cases (Nos. 13, 14, and 15) in which the abdominal symptoms were clearly subsidiary to the formation of mammary abscess. In case 14 the only abdominal symptoms recorded are the following:—"The bowels had been moved twice the day before, but were now confined." After a saline purgative, "Bowels have been moved well."

But we must cease from further criticism, lest we should seem to want in appreciation of Dr. West's labours. This is by no means the case; but, since the book has reached a second edition, we can no longer allow its merits to cover its faults, but have endeavoured so to distinguish the latter that in a subsequent edition they may be separated from the former.

The Aural Surgery of the Present Day. By Dr. W. Kramer, of Berlin. London: The New Sydenham Society. 1863.

Deafness Practically Illustrated. Being an Exposition of the Nature, Causes, and Treatment of Diseases of the Ear. By James Yearsley, M.D. Sixth Edition. London: John Churchill and Sons. 1863.

Die Anatomie des Ohres, in Ihrer Anwendung auf die Praxis, und die Krankheiten des Gehorsorganes. Von Dr. Von Troeltsch. Wurzburg: 1860.

The Anatomy of the Ear in its relation to Practice, and the Diseases of the Organ of Hearing. By Dr. Von Troeltsch. Wurzburg: 1860.

Die Krankheiten des Ohres, ihre Erkenntniss und Behandlung. Ein Lehrbuch der Ohrenheilkunde in form Akademischer Vorträge. Von Dr. Von Troeltsch. Wurzburg: 1862.

The Diseases of the Ear; their Diagnosis and Treatment. A Compendium of Aural Surgery, in the form of Academic Lectures. By Dr. Von Troeltsch. Wurzburg: 1862.

Any one previously unacquainted with the subject, on perusing either of the volumes whose titles we have given above, might receive from it the impression that aural Surgery had attained a high degree of perfection. But this pleasing illusion would be at once dissipated by a perusal of the others. Unhappily there is hardly a point of importance, pathological or practical, on which their authors are not at variance; so that the puzzled reader feels at last, with whatever wish to yield his confidence, that he is compelled to assume an independent, not to say a sceptical position.

Of course we can notice only a few of the many questions at issue in this obscure because little cultivated corner of the Medical field; and Dr. Kramer's volume, having received the distinction of translation by the New Sydenham Society, claims our first attention.

We might have been glad to have received from this excellent Society a work on the ear in which scientific observations should have been placed before us free from admixture with controversial remarks, of many of which the least that can be said is that they are certainly either unjust or superfluous. But then probably we could not have been favoured with any production of Dr. Kramer's. So shutting our eyes to weaknesses of this kind, which seem to be inseparable from our author's idiosyncrasy, we will take up on their own merits the views which are succinctly set forth in this small volume. Dr. Kramer has been long known as a cultivator of aural Surgery, and for several years one of his works on this subject has been before the Profession in England. In taking up this new volume, therefore, produced after an interval of twenty-five years, we cannot but feel interested in comparing its contents with those of its predecessor. And when we do so, we are struck with a curious fact, perhaps we should say with two curious facts: there is change, amounting even to revolution, where we should have looked for resemblance; and there is identity where we should have hoped for and anticipated change. In substance the new work is, in many of the most important respects, entirely different from the old; in tone and style it is just the same. Advancing years and increased experience, while they often confirm the results of early observation, or justify the almost instinctive guesses of a naturally acute insight, often tend, at the same time, to diminish dogmatism, giving birth to a confidence that can afford to be modest. A first work, written in one's pristine ardour, may be excused for some excess of assurance, though depreciation of others never can be excused; but what are we to think of a second or third book in which that assurance is not mitigated one jot, while yet it quietly inverts the most characteristic doctrines of the first? Is not this a truly inverted prolongation of youth into age? Perhaps, however, there is a connexion, though one not obvious at first sight between these two characters of Dr. Kramer's work; and if his later experience had confirmed the statements so vehemently made before, we might happily have had its results placed before us in a more unassuming and scientific manner. How can a man who, having been quite sure before, has entirely changed his mind, expect to command our confidence, unless he is quite sure now? Shall he speak less decisively of his present views than he did of those which have turned out to be quite wrong?

We do not in the least degree mean to urge the change in Dr. Kramer's ideas as a fact to his disadvantage. On the contrary, it evidently speaks in favour both of his habits of study and of his sincerity. We only regret its effect upon his manner. Twenty-five years may surely be allowed to work a change, even a radical and fundamental change in a man's views of any branch of medicine, and especially in one on which, until of late, there has been bestowed so little honest work. But we think the change which Dr. Kramer's opinions have undergone is interesting in a scientific point of view, and that it indicates a fatal insufficiency in the methods of investigation which he formerly employed; which, however, are essentially the same as those on which he still relies. The chief point of difference between Dr. Kramer's present and his previous work consists in the reversed proportion of the cases in which he recognises "nervous deafness." In his earlier volume these were rated at more than half the total number of cases, being no fewer than 152 out of 300. Now, this form of disease is allowed to include only four cases out of 1000; the place of the remainder being occupied by two simple substitutes—"suppressed" and "interstitial" exudation in the tympanum. There can be no doubt that, in some respects, this modification of his views is an advance towards truth. The former estimate of "nervous deafness," doubtless, was a gross and even a wonderful exaggeration. We might be astonished how any one should have fallen into it, especially since, even at the time when Dr. Kramer's first volume was published, a great deal had been done to elucidate the true pathology of the cases thus designated by him; various diseased conditions of the tympanum and membrana tympani having been demonstrated, of which Dr. Kramer took (as, indeed, he takes now) no notice. But the mystery of this great error seems to clear itself up when we consider the grounds on which Dr. Kramer based his diagnosis. On referring to his work, we find that when the membrana tympani is neither acutely inflamed nor disorganised (that is, in all cases in which the disease does not *greatly* affect the parts visible to the eye), he relies for the interpretation of the morbid symptoms exclusively upon the sounds which he can elicit by catheterism of the Eustachian tube. It was thus that he fell, in a way easily intelligible, into his former idea with respect to the overwhelming multitude of cases of "nervous deafness," since he ascribed to that category all cases in which the catheter afforded to him no indications of any serious departure from health. We are convinced, by the perusal of his recent volume, that, the source of error remaining unrectified, he errs almost as considerably, though in another direction, still.

Irrespective of the results of dissections, of which there are now (thanks chiefly to the labours of one man) a respectable number reported, and which exhibit, as demonstrable causes of deafness, a large variety of lesions within the tympanum and labyrinth,—apart from these, and treating the question purely as a theoretical one, it is surely most improbable either that all the causes of hardness of hearing, lying deeper than the membrana tympani, should be such as to give characteristic indications on Eustachian catheterism, or that they should be summed up in the three sole forms which Dr. Kramer condescends to admit, of free, interstitial, and suppressed exudation. Of the existence of the last of these causes of deafness, indeed, Dr. Kramer does not profess to give demonstration. Has it ever been witnessed after death? or how is it to be recognised in the dead body? Or, supposing it to exist, why should it cause deafness? As for the evidence of its existence, which is derived from the sharp, dry sound of the inblown air, have we any proof that a similar sound would not be elicited by catheterism in many cases in which the hearing is not impaired? We venture to say that this "suppressed exudation" in the tympanum is, so far as any evidence yet adduced is concerned, as purely theoretical a disease as the author's former Nervous Deafness. Nor are we moved from this conviction by the reported curative virtues of the dilute liquor potassæ locally applied. We remember that in the days when "nervous deafness" reigned supreme in our author's writings there was a considerable list of cures by the prolonged injection of ether vapour. We trust these cures were as permanent as they were doubtless genuine; but, Dr. Kramer himself being witness, they did not prove the existence of nervous deafness.

With regard to the other affection into which our author's nervous deafness is resolved—the interstitial exudation in the tympanum—we suppose that this is our old acquaintance, thickening of the mucous membrane of the tympanum, under a new designation. Of the frequency of this affection there can be no doubt, and scarcely any of the injurious influence which it exerts upon the function of hearing. But we cannot agree with Dr. Kramer that the Eustachian catheter is needed to diagnose it, or that the indications furnished by this instrument at all exceed in value or reliableness those which are afforded by other means of investigation. The condition of the membrana tympani and of the throat, the history, the effect produced by inflation of the tympanum on the patient's part, are sufficient to inform us, in the vast majority of cases, when we have a thickened mucous membrane of the tympanum to deal with; while reliance upon catheterism alone, fixing the attention upon one single group of symptoms—the abnormal sounds produced by the entering air—to the exclusion of all others, tends to give a narrow bias to the thoughts, which it demands the greatest effort to resist. Thus, for example, though the reduction of the former enormous proportion of "nervous deafness" is unquestionably correct, we believe that to ignore its presence, as our author does, in all cases except those in which the power of hearing is entirely lost, is a great error still. An estimate which takes a wider view, and embraces other phenomena than those which even the acutest auscultation can reveal, finds grounds enough in cases which the most improved diagnosis still leaves numerous, to recognise a lesion having its seat behind, and not within, the tympanum.

Doubtless the diagnosis of the diseases of the ear, especially of those which are unattended with acute symptoms, is difficult, and as yet in many points imperfect. But these difficulties must be resolutely faced, and these lacunæ patiently filled. No real assistance is to be found in an arbitrary limitation of the methods of examination to one favourite plan, however valuable it may be in its proper place; nor can anything more than a short-lived and delusive confidence, to be followed by a fatal reaction, arise from the plan, however seductive it may appear, of artificially mapping out the vast field into a few simple divisions corresponding to the limits which we have thus imposed upon ourselves.

In the foregoing remarks we have by no means designed to depreciate the Eustachian catheter, or to dispute the interest and value of the information which may be gained by its means, especially in some cases. But Dr. Kramer seems to us to afford a signal instance of the mischief that results from the abuse of a good thing. Thus far we have regarded Eustachian catheterism chiefly as it is used by our author as a means of diagnosis, and have left ourselves little space to speak of his employment of it as a remedial agent. He uses it in three ways: for the insufflation of air in cases of engorgement of the tympanum with mucus; for the passage of catgut bougies in contractions of the calibre of the Eustachian tube, and for the blowing in of caustic solutions in affections of the mucous membrane of the tympanum. Of these plans we cannot here speak in detail. There is no doubt at all that great and rapid improvement of hearing may be produced in a considerable number of cases by inflation of the tympanum through the Eustachian catheter. Every one who has made the experiment must have met with many such cases. But every one also, we think, must have found a considerable tendency in the improvement thus effected to be but temporary, as indeed might reasonably have been expected. In what cases, and to what extent the Eustachian catheter should be used in preference to other means, which, if slower, are more physiologically rational, and promise more permanent results, is the real question at issue; and perhaps it would have been well if Dr. Kramer had bestowed upon it more thought than his book shows any indication of his having given. We cannot but note that his own estimate of his success is not very encouraging. "This unfavourable class of cases," he says, speaking of the "interstitial exudation" in the tympanum. What more could the most entire disbeliever in the efficacy of catheterism say? But, in truth, a continually increasing number of this "unfavourable class of cases" seem to us to come within the reach of remedial agencies carefully adapted to each case, and we look forward with a sanguine hope to the time as not very far distant, when our diagnosis, embracing all aids, shall have advanced so far that we shall be able, instead of massing them together under one general head, as was done so much of old, and as Dr. Kramer sets us the example of doing still, to distinguish the true lesions present in each, and to estimate on valid grounds the possibility or impossibility of cure.

Dr. Yearsley's volume is a new edition of his work on "Deafness in Connexion with Morbid Conditions of the Throat." It contains, besides, a reprint of the papers in which he first brought forward the use of cotton-wool in cases of perforation of the membrana tympani, and also of certain articles suggesting the treatment of discharges from the ear by plugging the meatus with cotton-wool.

We are happy to acknowledge the obligations of Aural Surgery to Dr. Yearsley for carrying out the inquiry into the class of cases in which the introduction of soft substances into the ear was beneficial. It is doubtless greatly due to his exertions that the method so often referred to by previous writers of artificially supplying the place of an absent membrana tympani has become now so firmly rooted, and so successful in its results.(a)

But, while we are glad to make this acknowledgment, we are bound, on behalf of all the interests of science, to protest in the strongest terms against the entire conception of Mr. Yearsley's proposed "treatment of discharge from the ear." Why should the ear alone, of all the organs of the body, continue to be made a field for the employment of nostrums for the "cure" of symptoms, instead of the scientific exploration and treatment of their various causes. Suppose there were suggested a "new method of treatment for discharges from the eyes," would not every ophthalmic Surgeon at once repudiate the idea as a mere relapsing into barbarism? There is no such disease as "otorrhœa," nor is there, nor can there be, any treatment appropriate to all forms of it. Unhappily, we fear that a treatment really appropriate to any form of it is but too unlikely to become generally established until the time arrives when the idea of a "treatment for otorrhœa" would be received with mere derision by all educated Practitioners. The plan Dr. Yearsley proposes is to plug the meatus, previously washed out and dried, with cotton-wool, carefully pressed down on every part, and changed every day. In how many cases of symptomatic discharge consequent on disease within the tympanum, or of irritation threatening the bone and brain, the universal carrying out of this manœuvre might set on foot an irremediable train of evils we tremble to think. There may be cases, however, to which the plan is suitable, and their clear enumeration and description might be a worthy task.

Of the volumes published by Dr. Von Troeltsch we are glad to be able to speak very highly. They are not free from a certain leaven of self-puffing, offensive—and long may it remain so—to an English taste; but he brings large resources to illustrate his subject, and treats it in a thoroughly comprehensive manner. In his case, too, there is not wanting the knowledge, which nothing else can supply, of the morbid conditions of the ear which are met with after death, and therefore may be positively known, some of them at least, to have existed during life. He has published the details of fifteen dissections of the ear in deaf persons who had been examined during life; the comparatively small German city in which he lives apparently affording a good sphere for these investigations. And here we would not lose the opportunity of impressing on our readers the necessity there is for examinations of this kind, if aural Surgery is to continue the progress which it has recently made. Opportunities of obtaining specimens of diseased ears, with accurate histories, must occur occasionally to every Practitioner, and, if embraced by all, the darkness which yet lingers here would soon begin to disperse. In fact, the careful dissection of any ear, of which it was accurately noted that the hearing power was *not* diminished until the approach of death, might furnish valuable results, inasmuch as it might help us to determine how far various apparently serious deviations from a healthy state do truly impair the hearing.

Dr. Von Troeltsch recommends the use of reflected light for the examination of the ear. He uses an ordinary reflecting mirror—that of the laryngoscope answers admirably—and places the patient between himself and a window, employing not the direct sunbeams, but the light reflected from a white cloud, etc. This method is certainly very convenient and effective, and we should be disposed to give it the preference to any other, except the direct rays of the sun made to fall upon the membrana tympani. The best plan, however, in our opinion is to examine the same ear under various modes of illumination.

In respect to treatment, Dr. Von Troeltsch's volumes do not contain much that is new. He objects to poultices in acute inflammations of the meatus or tympanum, and recommends instead the frequent filling of the meatus with hot water. He has great faith in the vapour of the hydrochlorate of ammonia as a means of restoring to a healthy state diseased mucous membranes. For gargling the throat he advises that the patient should lie down, the head being placed low and well thrown back, and then, the fluid being taken into the back part of the throat, the act of swallowing should be several times performed without its being suffered to descend. By this plan he thinks the effect of the gargle may be extended further.

The most valuable section of Dr. Von Troeltsch's book appears to us to be that in which he draws attention to the frequency and insidiousness of diseases of the tympanum in young children,—a fact to which his dissections first opened his eyes. The description he gives of "purulent catarrh of the middle ear," existing unsuspected among quite young children, especially of the neglected classes, is unquestionably true, so far as the pathological condition of the ear is concerned; but the symptoms (for which he avowedly draws on his imagination) are, according to our experience, not precisely those which occur. When serious symptoms of brain irritation do not arise, or convulsions do not close the scene, we have found that a general debility and dulness, a peculiar tendency to put the hands to the ears, pleasure in having them gently titillated, or pain expressed when they are washed, with an inability to bear rough or rapid movements, are the most characteristic general signs. On examination of the ear with the speculum, the appearance of the membrana tympani reveals the presence of pus upon its inner surface. We believe these cases generally yield readily to treatment conducted upon rational grounds.

(a) While upon the subject of the artificial membrana tympani, we may mention that a new claimant for the honour of first recommending the plan is introduced to us by Dr. Von Troeltsch, in the person of a German Physician, who, so long ago as 1815, proposed the construction of a membranous sheath, to fit into the meatus and close the orifice in cases of perforation.

PROGRESS OF MEDICAL SCIENCE.

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Selections from Foreign Journals.

ON THE AFFECTIONS OF THE TYMPANUM, AND THEIR DANGER TO LIFE.

By Dr. VON TROELTSCH.

THE delicate lining of the cavity of the tympanum does not admit of its being separated into mucous membrane and periosteum; and the membrane commonly called the mucous is also the supporter of the vessels of the bone, thus fulfilling the function of the periosteum. This duplex condition is of great importance, as long-continued or intense disease of the mucous membrane influences the nutrition of the bones constituting the tympanum. Every inflammation of the mucous membrane becomes a periostitis. If the inflammation is chronic there is thickening of the mucous membrane and hypertrophy of the bones; while, when acute, the membrane becomes ulcerated, and the periostitis oftener leads to atrophy of the bone and superficial caries. With increasing experience the author has become more and more convinced that caries of the petrous bone is infinitely more frequently due to neglected inflammation of the soft parts of the outer and middle ear than to any primary disease of the bone itself. We have only to consider the parts which surround the inflamed tympanum to learn how easily the affection may spread to these. The frequency of consequent perforation of the membrana tympani is well known; and the researches of Lebert and Gull confirm the conclusions arrived at by the author, that the extension of the inflammation through the roof of the cavity to the meninges and the brain, and the production of abscess of the brain, is, indeed, no very rare occurrence. Important is the fact, that the diseases of the tympanum are taking place in the vicinity of many diploetic spaces, into which the inflammation is easily propagated in the form of osteophlebitis. This favours the formation of thrombus, which takes place the more readily from the propinquity of sinuses to the tympanum. Lebert has the merit of pointing out how frequently inflammation of these sinuses is due to otitis, and the fact, that the cerebral, typhoid, or pyæmic symptoms hence arising are commonly misunderstood. Then, again, how near the floor of the typanum is to the jugular vein; and if the ill effects of collections of matter in the cavity have been little observed in this direction, this arises less from the rarity of the occurrence than the fact of these parts not being examined after death. The vein, as also the internal carotid artery, is only separated from the cavity by a thin, transparent plate of bone, which is often defective, and there is always danger of the caries extending in this direction. Finally, the labyrinth or the facial nerve may participate in the inflammation, and suppuration may take place within the porus acusticus internus, leading to purulent meningitis.

When we consider all these dangerous surroundings of the tympanum, we cannot but feel astonished at the indifference with which inflammation and suppuration of this portion of the ear have been hitherto treated, not only by the public, but by Medical Practitioners themselves. Yet, it is in the cavity of the tympanum that accumulation and decomposition of secretions take place so easily, inasmuch as such secretions are usually of firm consistence, the walls of the cavity are full of depressions and sinuosities, and its floor is below the level of the passage by which these products might be discharged externally. As the lower edge of the membrana tympani does not extend to the floor of the cavity, even when this membrane is totally destroyed there is still no free issue of the discharges by the meatus. The narrow cavity of the Eustachian tube, the mucous membrane of which usually in these cases becomes tumefied, soon becomes obstructed with secretions, so that a discharge of these into the throat takes place much seldomer than is generally supposed. By the passage of the discharges into the cells of the mastoid process nothing is gained, unless it serve to arouse the Practitioner's attention to the threatening danger. Although in the great majority of cases, when dangerous *otitis interna* exists, purulent discharges and perforation of the membrane are present, these conditions are not essential accompaniments. The membrane sometimes acquires great power of resistance from the thickening it has undergone during the early stages of the inflammatory process; while, in other cases, the otitis runs its course so rapidly as to terminate in a fatal issue before the membrane has yielded. Still, the cases on record in which death has taken place without perforation are few in number. The author believes the Profession and public in England are far more alive to the dangers of chronic otorrhœa than they are in Germany, judging from the numerous preparations contained in the Hospital museums, the cases recorded, and the fact, that life-assurance is effected with difficulty when this affection exists. He believes, judging from his own experience, that could an exact statistical account of the average duration of life of individuals suffering from chronic otorrhœa be procured, very surprising results would be obtained. It is true that there are numbers of persons having purulent discharges from the ear, who remain entirely well, and who, possibly, after a long course of years, succumb, so far as our knowledge goes, to some disease having no relation to the affection of the ear. But Dr. Von Troeltsch, who for many years has had the opportunity of watching a considerable number of individuals suffering from chronic affections of the ear, has been struck with the large proportion of these cases, mostly men in the prime of life, who have died somewhat suddenly, the subjects of acute tuberculosis of the meninges, the lungs, or the intestinal canal, exhibiting symptoms of a septic infection of the blood. He has long since put to himself the question, whether some forms of rapid tuberculosis may not be explained by an infection of the blood, due to some purulent collection. Professor Buhl, of Munich, has proved by facts that acute miliary tuberculosis may thus originate. What more likely to serve as such source of infection than pus accumulated in the middle ear and its cellular communications, and there undergoing caseous metamorphosis? —*Deutsche Klinik*, 1862, No. 39.

ON EARLY RICKETS.

By M. JULES GUERIN.

REVIEWING a discussion on this subject at the Bordeaux Medical Society, M. Guérin makes some interesting observations upon the more general question of rickets. He observes that we no longer confound, as was done some twenty years back, true rickets with deformity of the spine, but confine the term to a disease of childhood characterised by an affection of the whole bony system, whether there be spinal deviation or not. The only questions discussed at the Bordeaux Society were whether rickets may exist without deviation of the spine, and whether there is such an affection as fœtal rickets. With respect to the first of these questions, M. Guérin observes that he is in the daily habit of seeing the early stages of rickets without apparent alteration of the health or deviation of the spine; but among these cases there is this great distinction to be made, that the cases in which this exemption is observed are those met with in private practice, while the rickety children brought to the Hospital manifest signs of deranged health. The cause of the disease, which cause M. Guérin has long since proved is *premature alimentation*, operates with all its intensity upon the children of the poor, and only in a moderate degree upon those of the rich. The habits, manners, and necessities of the two classes sufficiently explain the frequency and intensity of rickets in the one and its rarity and mildness in the other. The coincidence of deviation of the spine is not necessary, and rickets may exist in a moderate degree, especially when the children have not walked, without it; but the inverse of this has never been observed, viz., a rickety deviation of the spine without general rickets, and especially without rickety deformity of the lower extremities. With respect to the existence of fœtal or congenital rickets, M. Guérin was for a long time undecided; but a small number of facts observed in man and animals, and especially in birds leaving the shell, induce him to admit its existence; but the extreme rarity of the facts proving it ought to render us very circumspect with reference to the reception of illustrative cases. The majority of these which have been adduced with this signification have evidently belonged to another order of facts, that of deformities induced by muscular retraction.—*Gazette Médicale*, No. 17.

EXCERPTA MINORA.

Physiological and Pathological Pus.—M. Jules Guérin thus sums up the doctrine he has been so long working at:—"There is a fundamental difference between pus secreted by wounds, and pus furnished in different morbid collections. In the former case it is modified blood; the return of this fluid and the elements which compose it to their normal condition, it is *physiological* pus. In the latter it is a contaminated fluid, changed by the morbid elements of which it is the vehicle—it is *pathological* pus. Physiological pus possesses, like the blood, a kind of vitality, while pathological pus is a dead, excrementitious product, susceptible in the highest degree of undergoing putrefaction. This great and important difference is especially appreciable with respect to traumatic abscesses and cold abscesses, constituting collections. The former require to be opened as soon as possible, and such opening ordinarily leads to no inconvenience; while the latter, on the contrary, are innocent only as long as they are sheltered from the air, their opening almost constantly giving rise to putrefaction of the pus, and exposing to the danger of purulent intoxication. The differences are therefore not merely nominal. Numerous investigations have shown that the decomposition of the pus is especially due to oxygen, hydrogen, nitrogen, and carbonic acid taking little part in this. Putrefaction, properly so called, results from the presence in the air or in the pus itself of dead organic elements acting as ferments." These different considerations led the author to establish his *subcutaneous method of treatment*, or treatment by *occlusion*.—*Gazette Medicale*, No. 14.

Tartar Emetic Plaister.—M. Mialhe gives the following formula for a plaister, which produces a much more manageable eruption than that in ordinary use:—White pitch, 40; black resin, 20; yellow-wax, 20; turpentine, 5; Olive oil, 5, and tartar emetic 10 parts. To be mixed into a plaister mass, and spread, while hot, on strips of calico, like ordinary strapping. This revulsive is of great use in chronic bronchitis and phthisis.—*Bull. de Thérap.*, vol. lxiii., p. 400.

GENERAL CORRESPONDENCE.

PROFESSOR MILLER AND THE EXECUTORS OF THE LATE MR. GRANT.

LETTER FROM DR. JAMES MILLER.

[To the Editor of the Medical Times and Gazette.]

SIR,—In reference to the correspondence between Dr. Vose, of Liverpool, and the executors of the late Mr. Grant, animadverted on in your last Number, I feel called on to state—

1. That I knew nothing whatever of this case and correspondence till a printed copy of the latter reached me a few days ago by post.

2. That the introduction of my name into that correspondence has been not only without my authority, but without my knowledge.

3. That the "tariff" to which I alluded in my private correspondence with Sir Thomas Gladstone in 1852 had reference to visits moderately "distant," and would not apply to such special services as those of Dr. Vose in the case now in question.

I am, &c.

JAMES MILLER.

29, Charlotte-square, Edinburgh, July 6.

CASE OF TRAUMATIC ANEURISM.

LETTER FROM MR. ROBERT SIM.

[To the Editor of the Medical Times and Gazette.]

SIR,—I send you an account of a case of traumatic aneurism (the *anévrysme faux consécutif* of the French), which, as it presents some features not met with every day, you may consider worth publishing.

On March 26 last, a seaman of a large bark, while at work in one of the tops, received a blow on the inner part of the right thigh by the falling of a studding sail-boom from a height of about fourteen feet. The spar struck him diagonally across the thigh, just over the point where the femoral artery penetrates the tendon of the third adductor—the very spot where the vessel is most apt to be injured by a contusion. The blow did not disable him at the time. He continued at work for three days after the accident, and it appears without inconvenience, therefore the contusion of the muscles was not severe. Three days after the injury, while at the wheel, he felt "something give way" at the place where he was struck, and on looking at his thigh he found a swelling about the size of a hen's egg. From this time he was unable to walk, as the tumour rapidly increased in size. At first it did not cause him pain, but a feeling of numbness throughout the limb. When brought into the British Infirmary here, on April 23, he was in extreme pain; its chief seat being the knee, and shooting down the leg. The tumour had by this time attained to an enormous size, occupying the lower half of the thigh, and also the popliteal space. The leg and foot were swollen on account of the venous circulation being impeded. The circumference of the thigh where the swelling was greatest measured 23½ inches; that of the other thigh, at the corresponding point, measuring 15 inches. The tension on the ligamentum patellæ was so great, in consequence of the swelling above the knee, that it was lengthened upwards of an inch, and probably it was partially ruptured. It was the forcible displacement of the patella which was the cause of the greatest pain. The leg was bent at right angles with the thigh, and could not be moved in any direction. The counteraction of the ligamentum patellæ and extensors on the fore part of the thigh, on the one hand, and the swelling in the popliteal space, pressing outwards the tendons attached to the tibia, on the other, caused the immobility.

On first seeing the tumour I could not discover any pulsation by the most careful examination. I need hardly say that there was no aneurismal murmur in such a case. For a moment I was inclined to think that I had simply to deal with an abscess, yet there was something in the appearance of the tumour which made me hesitate before coming to a decision. The skin was hot and glistening. There was a sensation of deep-seated fluctuation, while the external part of the tumour was extremely hard and unyielding. It was of great importance to come to a decision, as the man was in great pain, so I determined on making an exploratory puncture. I used a very fine needle of a Pravaz syringe, introducing it, perpendicularly to the skin, to a depth of two inches. Then applying the syringe to the needle, and gently drawing up the piston, I saw a little blood enter. I next withdrew the needle for about an inch and raised the piston, but no more blood entered the syringe. I now withdrew the needle altogether, and found a string of clot attached to it, being partially drawn into its almost capillary orifice. There was now no doubt that the tumour contained blood, partly fluid, and partly coagulated, but there was no proof that the femoral artery was in communication with it. The man said that at times the swelling was less hard than at others, depending, doubtless, on the greater or less energy of the heart's action, but still I could not discover any pulsation. At last, on the 27th April, by very firmly compressing the base of the tumour laterally, I was able to feel a very slight pulsation, which ceased on the compression of the femoral artery. There was now no doubt as to the nature of the case. On the following day, with the assistance of my two colleagues, Drs. Roskilly and Dapples, chloroform having been administered, I ligatured the femoral artery two or three lines below the origin of the internal circumflex. It has not been necessary to adopt any other measures beyond gentle friction at first, and bandaging later. As it has been unnecessary to open the sac, I cannot, of course, say which of the coats of the artery had given way, or to what extent it was injured.

On the second day after the application of the ligature the pain in the knee had considerably abated, and by the fifth day it had altogether ceased. The re-absorption of the blood has gone on steadily, but slowly, from the first, and now very little swelling remains. The ligature came away on the seventeenth day. The wound healed without accident. The patient is lame only on account of the loose state of the ligamentum patellæ, which Dr. Dapples, who is at present in charge of the Hospital, is treating with galvanism, and seemingly with benefit. It becomes a question now whether the knee-joint will ever regain its former strength; I doubt it. At all events it will not be for a long time to come.

I am, &c. ROBERT SIM.

Naples, June 26.

FARRINGDON DISPENSARY—MERCURIO-SYPHILITIC DISEASE.

LETTER FROM DR. CHARLES DRYSDALE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Several circumstances lead me to believe that, ere long, the propriety of administering mercurials internally in syphilis will come prominently before the Profession for discussion. A recent debate in the Medico-Chirurgical Society, and the observations of Mr. Spencer Wells, disclose the fact that the ideas of some of the leading Surgeons are beginning to lose their hold upon many of the most distinguished among the younger practitioners on this subject, and, as it is well known that even among the mercurialists the most striking differences in practice are observable, perhaps you will kindly permit a total disbeliever in the value of mercurial treatment in syphilis a few remarks upon this subject.

The question of "Mercurials in Syphilis" is of the highest importance. On its solution, it appears to me, depends the future of mercury as a therapeutic agent. Dr. Habershon has lately done so much good service in demonstrating the injurious effect of this vaunted remedy in various diseases, that I need not here dilate upon that topic, and will only say that I concur in his disapproval of the administration of mercury in almost all diseases of the lungs, heart, abdomen, and brain. Indeed, Mr. Zachariah Laurence has lately discontinued the use of mercury in the treatment of iritis, and uses opium alone, with much success, whilst podophyllin has taken the place of mercury in the treatment of congestion of the liver.

But the citadel of the mercurialists is syphilis, and they cling to its administration in that disease with a tenacity worthy of a better cause. True it is, that for a time there was a defalcation from their ranks when Fergusson, Guthrie, Rose, Hennen, etc., on returning from the Peninsula, pointed out how much better the troops got on without it; and the treatment of more than a thousand Hospital cases by Fricke, and as many by Desruelles, in the Val de Grace Hospital of Paris, without a particle of mercury followed, and nearly routed the adherents of the practice of Astruc and Hunter.

A reaction, however, soon took place, under the generalship of the illustrious M. Ricord, and his partisans in London and Paris are now decidedly in the majority. I have, however, remarked in the writings of his disciples in England a decided falling off from the zeal of the "*maestro*," for, whilst M. Ricord is in favour of a six months' course of a daily dose of iodide of mercury, followed by three months of iodide of potassium, I find our most distinguished London authors ambiguous as to the length of time the mineral is to be used; and, moreover, they do not all follow M. Ricord's method, but make use of the three modes, which are as ancient as the days before Astruc, —viz., inunction, fumigation, and internal administration.

It has been my lot to see many severe and protracted cases of disease, produced, in my opinion, by the use of each of these three methods, and, if such effects are not so frequently visible now as formerly, it is simply because Practitioners are now beginning to give less and less of their vaunted specific. All who have read the voluminous evidence of Fergusson, Hennen, Fricke, Desruelles, the French and Swedish Councils of Health, Harris, etc., are well aware that symptoms such as related in the following cases never occur when patients are treated by simple rest, diet, and cleanliness. Besides this, the time of treatment, according to Desruelles, is not half so long when no mercury is administered.

Case 1.—*Primary Sore Treated by Mercurials—Destruction of Nose—Phthisis—Death.*

On May 28, 1862, I was asked by W. Allingham, F.R.C.S., to examine the chest of a young man, aged 23.

History.—Parents healthy; no phthisis in the family. Patient was always in good health until infected. He is a native of London. Two years and eight months ago, whilst serving in a militia regiment in Dublin, he contracted a sore, which became large and indurated. Was treated for this at the Richmond Hospital for six weeks with pills, to be taken twice a day, which made his mouth sore and the saliva run out. Treated again by the same gentleman for a period of two months, for another attack of the complaint, by pills, which again made his mouth sore. Had not had any eruption on the body, but sore throat. Sixteen months ago, at Aldershot, ulcers commenced at the corner of the nose, and he began to cough.

Present Condition.—The alæ of the nose are completely eaten away, as also the soft palate. There are marks of serpiginous ulcers over both cheeks and on lower extremities. Loud cavernous râles and cavernous breathing are heard under both clavicles, Emaciation extreme. The young man died next day.

Case 2.—*Salivation for Primary Sore—Thirteen Miscarriages—Iritis—Necrosis of Lower Jaw.*

Mary H., aged 46, August, 1861. Twenty-one years ago patient contracted a sore from her husband whilst pregnant. She was treated for about nine months with pills and mixture, which made her mouth sore, and had mercurial ointment rubbed into the body in various parts. She was twice salivated during the treatment. Since then she has had thirteen miscarriages and seven children born alive, of whom three died, and of the four living all are weakly, and one is paralysed. Patient has had iritis in left eye, and is blind in that eye. Has severe pains in left side of head. Four months ago a piece of lower jaw, on left side, came away with two teeth. A large piece of the centre of the lower jaw is necrosed, although not ready for removal.

Case 3.—*Mercurial Fumigations for Secondaries—Extensive Rupia.*

Eliza S., aged 20, September, 1862.

History—About twelve months ago she perceived a small, hard sore on the vulva, which disappeared without any treatment. About five months afterwards appeared a skin disease and sore throat. She was taken into an Hospital, and had mercurial vapour baths and pills at bedtime for two months.

Present Condition.—Patient has all over the body, and particularly on her right leg, large scabs of rupia, some of which have fallen off, and disclose large unhealthy ulcers. Is very weak and emaciated, with all the aspect of a person poisoned by the mercurio-syphilitic disease. Ordered pot. iod. as an antidote to the mercury.

Much triumph has been indulged in by mercurialists concerning the treatment of infantile syphilis by mercury. I regret to say I cannot share their exultation, for I have seen too many deaths of infants when treated with the mineral to believe it to be a specific for this form of the disease.

Some time ago, Sir, (*Medical Times and Gazette*, November, 1862) you did me the favour to publish two cases of infantile syphilis which had recovered under the influence of careful diet, cleanliness, and chlorate of potash; since then I have treated two more cases with like treatment and like result; and W. Allingham, F.R.C.S., has treated ten cases, without a fatal result, by chlorate of potash and hydrochloric acid. Indeed, I believe that mercury, instead of always curing infantile disease, sometimes causes death; the following case is an example of this:—

Case 4.—October 28, 1861, I saw a child, aged 11 months, covered from head to foot with a squamous syphilitic eruption, especially on the legs. The child snuffled, and the posterior cervical glands were enlarged. In other respects the child was plump and well-grown. Child to have its waist bound with a flannel band, on which a small quantity of mercurial ointment is to be smeared; the bandage to be removed every second day.

November 8.—Spots greatly faded, almost gone. The child looks very feeble, and has lost all its liveliness.

15th.—Mother came for a certificate of death.

After such results as the above of mercurial interference, let us look at the other picture of the disease, when treated as all other blood poisons now are, antiphlogistically, without specifics.

Hennen treated 417 cases without mercury, and iritis appeared only in two. Fricke, in the Hamburg Hospital, treated more than a thousand without it, and had not one case of iritis, and never observed any bone disease during the non-specific treatment of the disease.

John Thompson, Liston, Syme, Hughes Bennett, Cooke, and a host of other celebrated names in England, France, and Germany, have repeatedly asserted the same as these authorities, and have one and all proved, not by assertions only, but by extensive comparative experiment, that syphilis, when treated by careful diet, rest, cleanliness, and external applications, is a disease of a very mild character.

M. Desruelles, in his account of his treatment of the soldiers at the Val de Grace Hospital, in Paris, says:—"It is easy to see that the internal treatment is reduced to the greatest simplicity; the external treatment is not more complicated, and, for the one as for the other, the help of pharmacy is almost nil."

So strong an attachment, however, do some Physicians and Surgeons evince for specific treatment, that I verily believe it will require half a century before the administration of a drug, which has caused, according to the above quoted authors, the miseries of iritis, bone disease, and ulcers of soft parts, will be abandoned, and the constitution allowed, as in the days of Hippocrates, Celsus, and Galen (for I am convinced, with M. Ricord and Mr. Travers, that the disease has always existed, although the connexion between primaries and the eruption was not perceived by Celsus, etc.), to struggle with the poison fairly, aided by attention to regimen, diet, and cleanliness.

I conclude, Sir, this somewhat lengthy epistle, by a quotation from Professor Hughes Bennett, a gentleman who has done more than any to clear away the empirical from the treatment of disease, and to establish the deductive, or true method of therapeutics :—

"When we treat syphilis on the same principles that we do scarlatina or small-pox it will prove infinitely less fatal than these disorders." I am, &c.

Charles Drysdale,
M.D., M.R.C.P. Lond., F.R.C.S. Eng.

MEDICAL NEWS.

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Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, July 2, 1863 :—

George Harrap, Charing-cross Hospital; Alfred Brend, Middlesex Hospital.

The following gentlemen also on the same day passed their First Examination :—

Edward Jeffery, King's College; Spencer Henry Simpson, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Alderson, Frederick Henry, M.R.C.S. Eng., has been appointed House-Surgeon to the West London Hospital, Hammersmith.

Bayley, Joseph, M.R.C.S. Eng., has been appointed Superintendent of the Salop and Montgomery Counties Lunatic Asylum, Shrewsbury.

Couper, John, F.R.C.S. Eng., has been elected Lecturer on Physiology at the London Hospital Medical College.

Davies, William, M.R.C S. Eng., has been appointed Assistant Medical Officer to the Salop and Montgomery Counties Lunatic Asylum, Shrewsbury.

Hughes, James S., M.D. Glasg., has been appointed Professor of Surgery in the Royal College of Surgeons, Ireland.

Hughes, Thomas H., M.D. Edin., has been elected House-Surgeon to the General Infirmary, Chester.

Rivington, Walter, F.R.C.S. Eng., has been elected Assistant-Surgeon to the London Hospital.

Sturges, O., B.A., M.B., has been appointed Medical Registrar to St. George's Hospital.

DEATHS.

Blakie, James, M.D. Aberd., at Grantown, Strathspey, Inverness-shire, on June 22, aged 30.

Clark, John, M.R.C.S. Eng., at Weldon, Northamptonshire, on July 1, aged 78. He was one of the few survivors of the battle of Trafalgar, at which he was present as Assistant-Surgeon.

Heathcote, Ralph, L.F.P.S. Glasg., at Waltham, Leicestershire, on June 18, aged 68.

Hyde, Sidney, M.R.C.S. Eng., on July 3, aged 23, son of the late Charles Hyde, Esq., of Ely-place, Holborn.

Nicholas, Francis T., L.R.C.P. Ed., at Liskeard, Cornwall, on June 19, aged 44.

Pentland, Francis, L.K.Q.C.P.I., at Carbury, Enfield, Co. Kildare, recently.

Spencer, William, late Surgeon of the 5th Bengal Light Cavalry, on July 3, at Bath, aged 68.

University Intelligence.—Oxford, June 25.—In a Congregation holden this morning at ten o'clock, the following degree was conferred :—Doctor of Medicine (*Comitatis causa*) : Thomas Moore Sunter, Trinity, Dublin.

The late Mr. Henry Charles Johnson.—At a meeting held on Tuesday, the 7th instant, of the friends of this distinguished Surgeon, it was proposed to raise a memorial fund for the endowment of one of the convalescent wards in St. George's Hospital, to which institution he had been attached as Surgeon for nearly twenty years. It was further proposed that an engraving be executed of the portrait of Mr. H. C. Johnson, lately presented by his brother to the Governors of the Hospital, and that a copy be given to each contributor to the fund. Lord Eustace Cecil, of 32, Eccleston square; Mr. R. Ruthvyn Pym, of the Bank of England (Western Branch); and Mr. H. Potter, 56, Maddox-street, were appointed to receive subscriptions in furtherance of the above object.

The Health of the King of the Belgians.—His Majesty the King of the Belgians, since the last operation in the middle of June by Mr. Henry Thompson, has gradually improved. His health and strength are excellent; all pain has ceased, and all other symptoms have steadily diminished, until there is no longer reason to believe that any stone or fragment remains in the bladder. Mr. Thompson may therefore not return for some time to revisit his Majesty.

Prosecution for Heresy in a Thesis.—The Assize Court of Cagliari has just condemned a Physician to three months' imprisonment, and a fine of 500 francs, for some erroneous propositions on the wounds and death of Christ, developed in his Surgical thesis.

Professor Czermak in Dublin.—Last week the learned Professor of the laryngoscope delivered, in the Medical School of Trinity College, a course of three lectures, illustrated by practical demonstrations upon his specialty, which was attended by a numerous audience, including all the leading members of the Profession in the Irish metropolis. In addition, the Professor each morning held demonstrations at a different Hospital, so that ample opportunity has been afforded to both Practitioners and pupils at the other side of the Channel of becoming acquainted with his important method of investigation. The first lecture was devoted chiefly to the history of laryngoscopy, to auto-laryngoscopy, to demonstrations of the larynx, trachea, etc. ; the second to auto-rhinoscopy, to demonstrations of the posterior nares of the turbinated bones, and of the Eustachian tubes, etc. The third lecture treated of the method of investigating patients, of laryngoscopy and rhinoscopy in their application to the detection and treatment of disease, and of the lecturer's method of local treatment.

Supposed Murder at Islington.—The remains of a child have been discovered buried in a nursery garden at Islington. They are supposed to have belonged to a little girl of eight years, named Hunter, who was lost on March 30, 1862. The skull was first discovered, and was buried by the proprietor of the garden, who believed that it had been thrown away by a Medical student. Since then most of the bones have been found, with the exception of the jawbone. Dr. Billinghurst, the police Surgeon of Islington, examined the bones, and found them belonging to one individual aged apparently from eight to ten years. His opinion was formed on the progress of ossification in the long bones and on the development of the skull. The second teeth were developed. There were no fracture of the skull or the long bones; one rib was broken, but that had been probably done by the spade. The bones had been acted on by lime; some of the hair and parts of the clothes were found. The integuments were entirely gone. A man suspected of being the murderer is in custody.

The Fishguard Murder.—This case, which we noticed at some length last week, has been tried by Baron Wilde at the summer assizes, South Wales Circuit. The following was part of the dying declaration made by Williams :—"The first time I became sick and vomited I had partaken of broth, prepared and given to me by Lydia for my dinner. The sensation I felt at the time was a burning in my stomach ; my throat was dry, shrunk up, and burning ; my tongue much swollen ; my lips swollen and cracked ; the skin on my body dry, withered, and peeling off. I make this declaration, believing that I am now dying, and will not recover." The jury returned a verdict against the woman Lydia Williams of "*Guilty* of the intent, but not of the murder." She was sentenced to penal servitude for life.

Lord Shaftesbury and the Commissioners of Lunacy.—Lord Shaftesbury has successfully rebutted the allegations made by Mr. R. C. Hamilton against the Commissioners of Lunacy at the late meeting of the Governors of Bethlehem Hospital. On that occasion Mr. Hamilton said—"He could not, however, forego that opportunity of stating that he for one received any communication from the Commissioners in Lunacy with a grain of salt. He remembered on their sending some years ago two of their body to inquire into the state of a lunatic asylum in Lincoln, that those gentlemen never entered the asylum. On the contrary, they had an interview at the inn where they stayed with one of the official authorities connected with the institution, and who was at that time 'under a cloud' with reference to matters affecting his honesty. From him they received a garbled, unfair, and untrue account of the asylum, which up to that time had been considered by those best acquainted with it as one of the best institutions of the kind in the whole country, and which was among the first to free the inmates from a system of restraint. On the authority of that delinquent officer the inspectors framed their report, and when it arrived in Lincoln, he was expiating on the treadmill of the gaol there the felony of which he had been convicted." These assertions led to a correspondence with Lord Shaftesbury, who, as chairman of the Commissioners, has published the following statement of the facts :—"The Commissioners, visiting Lincoln in July, 1846, in the ordinary routine of their circuit duties, received information respecting the Lincoln Asylum from a person who waited upon them at their hotel. They made no report on this information, and whether or not it was imperfect they did not discuss or determine. All that they did was to suggest an inquiry. This inquiry was intrusted to two other Commissioners, on whom it imposed neither the 'trouble' nor the 'expense' of a special journey. They made the investigation when at Lincoln during their ordinary circuit, in September, 1846. They spent two days at the Asylum; they carefully inquired, not alone into the information received from the person to whom your letter alludes, but into other serious written statements received subsequently from one of the three visiting physicians of the institution; and upon the evidence thus personally taken at the asylum they grounded their report to this Board, of which a copy was in due course sent to the Governors."

SOUTHAMPTON MEDICAL SOCIETY.—Netley Abbey was on Thursday the scene of the annual reunion of this Society, the members of which, to the number of sixty-five, sat down to a cold collation, spread in that part of the ruins known as the Abbots' lodgings. Those rare old fellows for good cheer would, we opine, have opened their eyes rather widely if they could only have peeped in upon Thursday's scene. There, amid the tombstones of departed centuries, a snug party had assembled to enjoy "the feast of reason and the flow of soul,"—a very army of scientific warriors, who, for the nonce, preferred and discussed the quality of the sparkling champagne to the bitter draught, and delved more deeply into the mysteries of the kitchen than of the Surgery. At two o'clock the Society assembled at the Royal Victoria Hospital, and were, with the greatest kindness and courtesy, conducted over the building by Inspector-General Dr. Anderson; Col. Wilbraham, the commandant; Deputy Inspectors-General Dr. McLean, and Professor Longmore, Dr. Parkes, Dr. Aitken, and other officers. After a long and careful survey of the laboratory, microscopical room, and wards of the Hospital, with which all present were greatly pleased, the party adjourned to the old Abbey for refreshment. Dr. Bullar, President of the Society, occupied the chair, and Dr. Lake, Vice-President, the vice-chair. Among those present were Dr. Anderson, Col. Wilbraham, the Rev. Mr. Crozier, resident chaplain to the Victoria Hospital; Dr. McLean, Professors Longmore, Parkes, and Aitken, Major Ravenhill, R.E., W. Dayman, Esq., C. Mayo, Esq., Dr. Orsborne, Dr. Burnett, Dr. Heale, Dr. Churchill, Rev. M. Powley, J. K. Sampson, Esq., F. Cooper, Esq., Dr. Richardson, R.N., Dr. Butler, Dr. Scott, J. Covey, Esq., S. Summers, Esq., Dr. Heath, R.N., Dr. Case, — Case, Esq., Dr. Millar, — Flower, Esq., Dr. McKinnon, Dr. Mark, Dr. Bond, W. B. Norcott, Esq., Dr. Nunn, C. Bromley, Esq., — Pearce, Esq., Dr. Griffin, J. R. Shorto, Esq., C. Eddowes, Esq., — L. A. Lawrence, Esq., Dr. Sims, J. Manning, Esq., Dr. Breary, J. E. Brine, Esq., R. Ware, Esq., Drs. Langstaff and Aldridge, hon. secs., etc. The usual loyal and patriotic toasts, together with the toast of the Army Medical School, proposed by Dr. Lake and responded to by Professors Longmore and Parkes, were drunk. Mr. Dayman, in the course of a speech, in which he returned thanks for the volunteers, made the following allusion to Dr. Charles Mayo, a son of Mr. Mayo, of Winchester, who is now serving with considerable distinction as a Medical officer in the Federal army :—"One word for the volunteers of Hampshire. Life is not long enough—opportunities were wanting to make heroes of us all, but when a gentleman went out from amongst them, and signalised himself by devotion to science, he was deserving all the encouragement and all the praise which they could bestow upon the brave. A son of one of their old associates, Mr. Mayo, of Winchester (hear), was at that moment with the army in America. [A deeply-toned Voice: Yes, but on the wrong side—laughter.] There were no wrongs on the side of Surgery. (Hear.) [A Voice: I should prefer his being in the south. Another Voice: The north is more bracing, and laughter.] Their young friend, Dr. Chas. Mayo, was with the army in North America.—[A Voice: The right man in the right place, and laughter.] He was gone out as a volunteer Surgeon, taking with him no prejudiced views of the supremacy of Military Surgery, but content to carry into the field the principles which had made his father, as a Surgeon—those principles of the old school which had produced such men as Percival Pott, John Abernethy, Lawrence, Paget. Might their young friend do justice, not only to Hampshire, but also to England." (Applause). Mr. Francis Cooper, in proposing the Medical Press, gave the following account of his share in the choice of site of the Netley Hospital:—He said it was many years ago since the President and himself were conjointly requested by the Government to make a careful examination of the site of Netley Hospital, and after they had sent up their report, he was requested to go to the War Office, where he saw Mr. Sidney Herbert, who put to him one or two questions of a startling character. "Mr. Officer of Health," said he, "do you mean to stand by your report?" "Well," he replied, "I do mean to stand by it." "Do you mean to tell me that this is really and truly a healthy site. Haven't you any bogs in the neighbourhood?" He replied, "If the Government will build me a house, even contiguous to the Marsh, about which there is so much needless reprobation, and give me £1000 a-year to live in it, I will go there to-morrow," (laughter and hear.) "Well," Mr. Herbert replied, shaking him by the hand and laughing, "I suppose we must take you at your word."—*Hampshire Independent*.

NOTES, QUERIES, AND REPLIES.

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He that questioneth much shall learn much.—*Bacon*.

Mr. Gillespie, Mauritius.—455, Strand, London.

Ungallant Legislation.—The *Moniteur* gives very interesting accounts of the Revolution in Madagascar. Among the despatches is a draft of the Madagascar "Constitution." The first article suggests that "the Queen shall drink no strong liquors."—*Evening Standard*, July 8.

The Women of Dahomey.—"The Amazons," says Commodore Wilmot, "are everything in Dahomey. When the King made his public entry into his capital, his carriage was drawn by this his body guard. The women are much more numerous than the men, perhaps three to one. The army is half made up of women. They are far superior to the men in appearance and figure, in their performances as soldiers, and in bravery. They are remarkably well-limbed and strong, and very active in their movements; they would run with some of the best runners in England. Armed with muskets and blunderbusses, they load and fire with remarkable rapidity, and in practice with ball at a mark proved themselves good shots. They carry swords also, and gigantic razors for cutting off heads. Some have bows and arrows. They have not the ferocity of countenance which might be expected from their vocation. Most of them are young and well-looking. They are supposed to lead a life of chastity, and are obliged to do so, for if they did anything wrong it would be sure to be discovered, and would be punished with death. They fetch water daily, the one in front with a bell round her neck to warn the men to run away, for if one dropped and broke her jar, the man who happened to be near would be considered the cause of the accident, and be imprisoned or have his head taken off. All day long the bell is heard, and people are flying away in all directions. The Amazons seem to enjoy it, and laughed heartily when the three Europeans stepped aside to avoid them."

Mr. Adams has received the following gratifying letter :—

"British Medical Association, Yorkshire Branch, York, July 1.

"Dear Sir,—I have much pleasure in forwarding you the copy of a resolution which was unanimously adopted at the meeting of our branch, held in Sheffield on the 18th June, viz. :—'That this meeting desires to join in the general expression of sympathy with Mr. Adams exhibited by the Profession throughout the kingdom under the trying circumstances in which he has been recently placed, and that the Secretary be requested to convey the same to Mr. Adams.'

"I am, dear Sir, yours very truly,

"To Wm. Adams, Esq. "GEO. HORNBY, Hon. Sec."

Erratum.—On page 25, article Homo Antiquissimus, for *Rhinoceros tichorhinus*, read *Rhinoceros leptorhinus*. The latter species has been, by later palæontologists, divided into three distinct types, and we believe that the specimens from St. Prest are referable to the species termed *R. etruscus*.

INSURANCE AGAINST SICKNESS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—If the correspondent of the *Medical Times and Gazette* of June 27 last will apply at 471, Oxford-street, London, for Friend-in-Need Life Assurance and Sick Fund Friendly Society, he will be supplied with prospectuses for the information he requires. I am, &c.

S. C.

July 3.

Variola in the Parturient State.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Permit me to record an instance of recovery from small-pox in a parturient patient of mine, which occurred some short time ago. The case was confluent, and of more than moderate severity, the eruption commencing within twenty-four hours after delivery. The woman, however, passed favourably through the stages of the disease—little medicine being administered—on a diet consisting principally of milk, and in about three weeks after her confinement was attending to her lighter domestic duties. I am, &c.

Hornsey-road, July 4. Edward Cottew.

The Electric Battery in Chloroform Accidents.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Please to state in the *Medical Times and Gazette*, as soon as possible, the particular kind of "portable electric battery" used by Dr. Kidd in the chloroform accident described in the Number for March 28 last, page 333, especially whether it is one having a continuous or interrupted current, whether a great or only moderate power was used, and where that kind of machine is to be procured. So many kinds of these machines are now made, producing very different effects, that no apology will be required for troubling you in this matter. I am, &c.

Liverpool, May 14. An Inquirer.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Dr. Kidd presents his compliments to the Editor of the *Medical Times and Gazette*. Dr. Kidd was asked three questions: 1. What kind of "apparatus" he had used in a certain accident from chloroform, previously noticed?—The magneto-electric "apparatus." 2. Did he advise the continuous or intermittent shocks?—Intermittent. 3. Did he advise weak currents or strong ones?—Weak ones.

The three questions obviously come from a practical man, and ought to be replied to; and it is treating the Liverpool inquirer badly to kick up such a dust and mystify the thing. Thirty-six deaths from chloroform are noted this year, all due to the want of A B C knowledge of the subject. The *Medical Times* is the best of the journals if it wishes, but usually stops half way in any subject like the present. The *Lancet* is simply contemptible, for it would make a party question of the multiplication table, or the circulation of the blood.

25, Sackville-street, Saturday.

Astigmatism.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Surely we have had enough correspondence, learned and unlearned, on this point, though there has been little enough point in either question or replies. Stigma means a punctum, or point, and every tyro in optics knows that the rays issuing from every point in an object should be refracted to a point on the retina to form a perfect image there. If the radii of curvature of the horizontal and vertical meridians of the eye are not equal, the rays will be refracted, not to a point, but to an infinite series of points *i.e.*, a line, as may be at the same time proved and corrected by a lens in which the radii of curvature are reversed. I am, &c.

Astigmaticus.

The Position of the Mirror in Laryngoscopy.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—With reference to Dr. J. Johnson's letter, which appeared in your impression of the 4th inst., I beg to add my concurring testimony to the greater facility which beginners enjoy in laryngoscopic manipulation by using the mirror over the forehead instead of in front of the eye. Having practised laryngoscopy for the last two years, I came, independently of Dr. J. Johnson, to the same conclusion he had arrived at, viz., the greater facility of manipulation by wearing the mirror over the forehead. No doubt that by looking through the mirror one must see more of the interior of the larynx than by looking below it, the angles of illumination and of vision not being coincident in these cases, but the difference is so small that in practice it is inappreciable, although when exhibited by a diagram on a black board it is startling enough.

As to the priority of invention, that is a vexed question; in my opinion there can be no doubt that the merit of introducing laryngoscopy as a practical, and, consequently, as a useful art, is due to my friend Professor Czermak, just as much as lithotrity is due to Civiale, though instruments for crushing the stone in the bladder had been designed before his time.

I am, &c.

31, Merrion-street, Merrion-square, Dublin. H. R. De Ricci.

Glycerine.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Since the year 1855 our pure glycerine has been constantly growing in favour with the Medical Profession, and "Price's glycerine" is now commonly prescribed in all cases of internal use. Our pure glycerine is now sold at less than one-fifth of the price at which, before 1855, the least impure—for pure did not then exist—glycerine was sold.

Recently, glycerine has been introduced, and in some cases has been advertised as pure, and as "equal to Price's." In the well-known Surgeon M. Demarquay's work, and we take the liberty of sending a copy, he more than once calls attention to the fact that applications of glycerine have in some cases failed in France, in consequence of impurity; see pages 26, 28, 80, 128, 168, etc.; and, speaking of English glycerine, at page 19, he says:—"Connue sous le nom de glycerine de Price, en bien de Wilson, elle est la seule des glycerines Anglaises qui merite d'être distinguée, les autres ne sont que des glycerines purifiées qui ne valent pas mieux que celles que nous donne notre industrie."

Fearing similar results from the use of the impure glycerine now being sold largely in England, we take the liberty of requesting that you will suggest to your readers to test the so-called pure glycerine "equal to Price's" glycerine with four simple tests. 1. Rubbing a small quantity on the back of the hand; this will bring out, when present, the fetid mouse-like smell due to volatile fat acids. 2. By nitrate of silver to show chlorides. 3. By sulphuretted hydrogen to show the presence of metal. 4. By oxalate of ammonia for lime.

Each bottle of "Price's glycerine" is tested in our laboratory before capsuling, and the cork is secured as in the accompanying bottle.

We are, &c.

Price's Patent Candle Company (Limited),
Geo. F. Wilson, Managing Director.

Belmont, Vauxhall, London, S., July 6.

Nitrate of Silver in Preventing the Pitting of Small-pox, etc.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The prevalency of small-pox has induced me to communicate the following observations:—

Having observed, many years ago, that the nitrate of silver had been used on the Continent by MM. Velpeau, Bretonneau, and Serres for the purpose of preventing pits and scars consequent on small-pox, I was induced to apply it as they directed, by puncturing the centre of each vesicle with a needle, and then applying the solid stick of the nitrate of silver. I found it effectual in preventing any further progress of the pox.

The next patient on whom I used the nitrate of silver was a strong, healthy young man, about twenty years of age, with confluent small-pox. I punctured a few of the vesicles on the face, but these being very numerous, I satisfied myself with applying the concentrated solution over the whole surface of the face, where they were most confluent, without making any punctures. The solution answered as well as where the punctures had been made in arresting the progress of the eruption. The next case of confluent small-pox was one where no punctures were made,—Mr. P., a young man, nineteen years of age, and of delicate constitution. From the confluent state of the pox I should have expected deep pits and scars on his face. I applied the concentrated solution on the whole of the face and the ears in the same manner as recommended in erysipelas.

The vesicles of the pox were immediately arrested in their progress, and in four days presented small hardened eschars, free from inflammation, whilst the pustules on the body were gradually proceeding to suppuration. In about nine days the eschar had come away from the face without leaving pits. In this case the nitrate of silver not only prevented the pits, but the inflammation, irritation, and offensive suppuration which are so distressing to the patient. If thought necessary, the nitrate of silver might be applied all over the scalp, as in erysipelas, to prevent cerebral inflammation. It might be applied on and within the cavity of the ear to prevent otitis, and on the conjunctiva to prevent ophthalmia. I have used as a gargle to the throat in small-pox, with great benefit, a solution of a scruple of nitrate of silver in three ounces of distilled water

For the remedy to be successful on preventing pitting, it should be applied on the fourth or fifth day of the eruption. The concentrated solution being used, composed of the old stick nitrate of silver, four scruples to four drachms of distilled water. I am, &c.

Jno. Higginbottom, F.R.S.

Nottingham, July 7.

Treatment of Snake Bites.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I enclose you a paragraph which appears in *The Warwick Mail*, of April 4, on the treatment of "Snake Bites," by Dr. Berncastle, Surgeon and oculist of Sydney. I may be perhaps permitted to summarise his statements, with the view that the same may receive insertion in your columns. It also appears that Dr. B. exhibited the arrangements, preparations, etc., of his remedies at a *conversazione* of the Philosophical Society, presided over by Sir John Young, in the Australian Library, Sydney. The subject of snake bites, though not very interesting to Medical men in this country, may yet not be devoid of interest to those who may reside in the colonies, or happen to be attached to the British Army.

The mere reference to this must now be a matter of public interest, particularly as we had here lately a fatal case of hydrophobia. Of all the poisons received into the system, that of hydrophobia is the most latent, sometimes, as we are told, not appearing for eighteen months or more. I introduce those few remarks, inasmuch as the same remedies seem to be applicable to both cases. Last summer, on my way through a neighbouring town (Rathkeale) I saw a boy seven years old who received a bite from a "rabid" dog an hour previously. The marks of the animal's teeth were on the flesh, but there was scarcely any bleeding from the wound. I used the solid caustic pretty freely, and sponged the wound and the parts around the wound with strong liquor ammonia. The lad got well without a single bad symptom. In this, as in every other case, when the bite is received during the "dog days," the dog was sacrificed, for what object we do not know, unless it is for the sake of satisfying the "superstitious" mind, and gratifying an "ignorant" prejudice.

The plan of treatment may be stated as follows:—1st. The wound if recent should be well sucked. 2ndly. When possible, ligatures should be applied. 3rdly. The wound and parts around the wound should be excised and freely bathed, so as to encourage the bleeding. 4thly. Caustic or ammonia may be afterwards applied, the selection to depend on the nature of the bite. 5thly. Stimulants (whisky) to be liberally given. 6thly. Half a teaspoonful of strong ammonia, and double this quantity of the tincture of assafoetida to be taken every quarter of an hour in a wineglassful of water. 7thly. When the bleeding has ceased the wound should be poulticed with ipecacuanha powder. 8thly. If convenient or suitable the actual cautery may be used. 9thly. In order to point out the value of stimulants, we may remark that old Indians in Canada will with impunity suffer themselves to be bitten by a rattlesnake, the most obnoxious of all the ophidia, after drinking a pint of whisky. 10th. The good of all or of any of these remedies will in a great degree depend on their immediate application. These remedies may be also usefully applied to the dangerous stings or bites of tarantulas, scorpions, centipedes, etc., etc.

I am, &c. T. B. Moriarty, A.B., M.D.

Limerick, June 21.

Hospital Pharmacy.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Hospital Physicians and Surgeons are, as a rule, the leading men in our Profession; we therefore expect them to originate or to encourage all movements tending to harmonise the practice of Medicine with advanced scientific views. On one point, judging from Mr. Squire's book on Hospital Pharmacopoeias, noticed in a late number, they seem to have made no advance beyond ordinary routine practice. The ever-ready rule of ordinary routine practice is that every patient must have his mixture. And, judging from Mr. Squire's book, this practice is too much encouraged by our Hospital staff. What is the meaning of this vast supply of ready-mixed miscellaneous materia, evidently prepared so as to be at hand in the treatment of great numbers of simultaneous cases? It means that many cases do not require a special medicinal treatment, but may be safely prescribed for from the vague generalities of the Hospital reservoir, which approaches very closely to an admission that these cases require no medicine at all. And it also means that provision must be made for supplying every patient with his bottle. At every bedside the mixture must take its permanent watch as the guardian angel of the invalid. A mixture of something, no matter what, so it be something.

Now this is just what we poor parish Surgeons have to do. Our patients, if they ail anything, have special thought given to their case, and a specially prepared mixture. If they ail little or nothing, or if the ailment is beyond the reach of medicinal remedy, they still have their mixture, a mixture powerful in colour and odour from the generalised utilities which compose the Mist. Mag. Co., or the Mist. rob. To send a patient away without a bottle is sheer neglect, is to despise him because he is poor and cannot pay, is to allow him to die unaided.

This is what we have to do, and we groan under the yoke. But why should the leaders of the Profession, who occupy a commanding position, whose motives in prescribing or withholding drugs could not be misinterpreted, why should they encourage this superstitious belief in the necessity of drug-medicine in all cases? It is said that the public, especially the poor, believes in drugs, and will have them. True; but the public has been taught this faith, and no other. We wish it to be better taught, and by progressive lessons as it is able. And we think that Hospital Physicians are the proper leaders in this rational movement.

But some cases require a placebo. Very well; let some cases have a placebo. Select your cases. If the welfare of a patient is imperilled by the absence of his accustomed guardian angel, let him have his bottle. Send him if you choose the Mistura Theriacum of the Hospital Pharmacopœia. Si placet, si decet, si oportet; send him a placebo. But how often would a word of encouragement be the surest and the most scientific placebo!

But if we do not give physic, our patients will leave us. True. I advocate no Quixotic self-sacrifice. The movement should not be commenced by private Practitioners. Our Hospital Physicians should inaugurate the movement. And, moreover, it is not difficult to convince a great number of patients that drug-medicine is unnecessary in many cases. It is one thing to run counter to this tendency to drug-worship, and another to encourage it. There is a middle way between the two extremes. We may tolerate error, but we need not give it our active support. We magnify the perversity of the public prejudice in a matter affecting its own interests; we underrate the power of Medical intelligence to influence public sentiment, if we suppose that a judicious and general opposition to this superstitious drug-idolatry would not be successful. We hold that these big bottles, the idols of the drug superstition, might soon be broken by the Profession, not only without loss of Professional influence over the public mind, but with positive gain. Idols ere now have been destroyed, and yet Medicine stands. At one time the faith in indiscriminate bleeding was as strong as the present faith in the indispensable bottle. Why not let the useless mixture swelt and mould by the side of the rusty lancet?

At one time the Profession itself was drug-ridden. If we have emancipated ourselves, why should not the public, if we help it? Newton only could discover the law of gravitation, but any schoolboy can be made to believe it. We cannot teach the public the processes by which we arrive at certain results. But surely we may induce men to accept these results.

There is a wonderful difference between our way of treating ourselves and the public. You seldom see a long line of empty bottles in a Medical man's bedroom addressed to himself. Many of our patients know that the drug-sender is not a drug-taker, and, not understanding the difficulty with which Medical men have to contend in this matter of drug-sending, they lose faith in medicine and the Medical art altogether.

The drug-worship which we tacitly encourage is the fundamental article of belief in all forms of ignorant or selfish systems. If by always ordering it in every case, we encourage the idea that drug-medicine is necessary in every case, are we not playing into the hands of the quacks who advertise their specific pills and mixtures? If we persuade or allow the patient to persuade himself that in a simple case our pills have cured him, if we systematically ignore the influence of natural remedies, what shall we say to him when he tells us that, in his next attack, Holloway cured him or a globule? We foster a delusion which is the stronghold of all illegitimate practice.

What is Homœopathy as a practice but drug-idolatry in its completest form. The remedial processes of nature are ignored. Every case must have its drug. The drug cures. The public prejudice is satisfied, and the tasteless globule is taken more easily than the vulgar bolus. Until we purge ourselves from all taint of drug-worship, we are not in a position effectually to combat the false systems grounded on that worship which are continually springing up.(a)

Is there a Medical Practitioner living of any pretension to analytical power who does not firmly believe that the great natural remedial agencies of time, air, food, rest, motion, quiet, cleanliness, vital action and reaction, etc., are more potent as means of cure in most cases, and in all as important as those foreign matters which experience alone teaches when to give and when to withhold in the treatment of disease? And thus believing, why do we not thus teach? We wait for the stepping forth of our natural leaders. They have done much for us, but we wish them to encourage by their example a more rational system of practice in relation to the great jug and bottle department. I am, &c.

June 27. PRO RE NATA.

COMMUNICATIONS have been received from—

DR. EDWIN LEE; DR. ABBOTTS SMITH; DR. C. KIDD; MR. EDWARD COTTEW; ROYAL INSTITUTION; DR. JAMES MILLER; DR. JOHN W. OGLE; ETHNOLOGICAL SOCIETY; DR. MORELL MACKENZIE; DR. T. M. SUNTER; MR. JOHN HIGGINBOTTOM; PRICE'S PATENT CANDLE COMPANY; DR. STEWART B. ROBERTS; MR. J. CRESSWELL; H. R. DE RICCI; ASTIGMATICUS; MESSRS. M. SALT AND SON; ACCIDENTAL DEATH INSURANCE COMPANY; DR. JAMES DEANE; S. C.; APOTHECARIES' HALL.

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·973 in.
Mean temperature	60·4°
Highest point of thermometer	74·2
Lowest point of thermometer	45·5
Mean dew-point temperature	49·5
General direction of wind	W.S.W.
Whole amount of rain in the week	0·00 in.

BOOKS RECEIVED.

Braithwaite's Retrospect of Medicine, Vol. 47. January to June, 1863. London: Simpkin and Co.

*** Contains a useful set of short memoranda, giving the births of the greatest "novelties of the season" in physic.

Lectures on Surgical Pathology. By James Paget, F.R.S. Edited by William Turner, M.B. London: Longman and Co. 1863.

*** A new edition in one volume. Professor Paget's engagements have compelled him to confide part of the labour of editing the new edition to Dr. W. Turner, of Edinburgh, whose able paper on cell pathology is known to most of us.

The Journal of Health, devoted to the popular exposition of the principles of health, the causes of disease, also to illustrate the truths of mental philosophy. Edited by Jacob Dixon, L.S.A., and Medical Officer of the Homœopathic Hospital, etc. July, 1863. London: J. Caudwell.

*** An omnium gatherum of mesmerism, homœopathy, teetotalism, vegetarianism, etc., with a strong Yankee flavour.

The Westminster Review for July, 1863. London: Trübner and Co.

*** An unusually interesting number. The articles on utilitarianism, gaming, and marriages of consanguinity, particularly so. On this last point the Review agrees with Dr. Child.

The York Star, No. 2. July, 1863.

*** "Insanientis sapientiæ vestigia."

The Australian Medical Journal. No. 30. April, 1863. Melbourne: Wilson and Mackinnon.

Clinical Essay on the Mineral Waters of Eaux Bonnes (Pyrenees). By Dr. Lucien Leudet. London. 1862.

Balneologische Notizen über die Kurmittel des Bades Reinerz in Schlesien. Von Dr. Hermann Beigel. Erlangen. 1863.

The Temperance Spectator. July, 1863. London: J. Caudwell.

The British Journal of Dental Science. No. 84. June, 1863. London: John Churchill and Sons.

A Manual of Ophthalmoscopic Surgery. By Jabez Hogg. Third Edition. London: John Churchill and Sons. 1863.

The Englishwoman's Journal. July, 1863. London: Kent and Co.

Speech of Henry Seymour, Esq., M.P., On the Irish Church. London: Hatchard. 1863.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 4, 1863.

BIRTHS.

Births of Boys, 995; Girls, 942; Total, 1937.
Average of 10 corresponding weeks, 1853-62, 1570·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	662	525	1187
Average of the ten years 1853–62	536·4	502·4	1038·8
Average corrected to increased population ..	..	..	1142
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	10	7	8	1	2	4	10
North ..	618,210	11	7	16	5	10	5	10
Central ..	378,058	4	4	14	3	2	10	10
East	571,158	12	1	20	3	4	12	10
South ..	773,175	6	14	15	..	8	10	7
Total.. ..	2,803,989	43	33	73	12	26	41	47

APPOINTMENTS FOR THE WEEK.

July 11. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

13. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

14. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.
ETHNOLOGICAL SOCIETY, 8 p.m. *Professor Busk*, "On the Preparation of Figures of the Typical Forms of Human Crania."

15. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

16. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

17. *Friday*.

Operations, Westminster Ophthalmic, 1½ p.m.

(a) Hydropathy ignores drugs, but water as used by it is a drug. It also is a drug idolatry.

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DEPUTY-CHAIRMAN—JOHN CHURCHILL, Esq.

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ANNUAL REVENUE, £120,000.

CLAIMS PAID.—The total claims arising from death which have been discharged by the Society amount to £300,000.

BONUSES.—Three distinct calculations have been made with a view of appropriating the surplus sum or profit arising from the operations of the Society: at the last, made at the beginning of the year 1859, the Actuary reported that, after putting by £180,879 18s. 10d. as a reserve for future contingencies, there was £67,347 15s. 9d. available for division.

ASSETS.—The Assured have the security not only of the Capital Stock, but of a large invested sum, amounting to MORE THAN HALF-A-MILLION, which, with the well-known character of the Directors of the Society, is a substantial guarantee that all claims will be met with readiness and punctuality.

The following Table will best illustrate the progress of the Society:—

Year.	Number of New Policies issued.	Sums Assured thereby.	Annual Premiums therefrom.			Total Accumulations from all sources.		
		£	£	s.	d.	£	s.	d.
1856	603	204,451	6,597	18	3	202,110	7	2
1857	572	221,122	7,735	9	5	238,055	1	7
1858	658	235,350	8,582	0	9	274,797	15	4
1859	812	294,495	10,172	19	6	309,444	5	2
1860	902	336,290	11,812	15	9	360,530	3	[illegible]
1861	1,115	361,960	12,868	3	11	414,231	5	9
1862	1,007	375,197	12,562	7	9	*484,976	14	[illegible]

JESSE HOBSON, F.L.S., Secretary.

* Since this Report was closed, the Accumulated Fund has so increased as to raise it above Half-a-Million.

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ORIGINAL LECTURES.

PROFESSOR HUXLEY'S LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

II.—*The Development of the Human Skull.*

(Continued from page 6.)

In the process of ossification thus commenced and advancing in the fœtal cranium, certain centres, at first distinct, unite, and become hard to distinguish from one another even before birth.

Fig. 15.

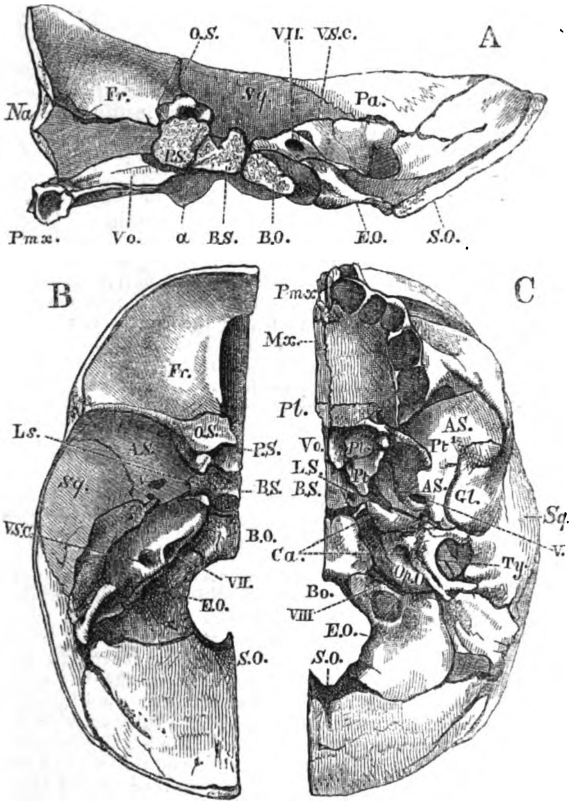

Fig. 15.—The human cranium at birth.—A, vertical and longitudinal section of the basal half of the cranium; B, upper, and C, under, view of the same preparation.

At this period a considerable interval of cartilage separates the basi-occipital from the basi-sphenoid; but the latter has, as at *a*, Fig. 15, A, become firmly united with the presphenoid, though traces of the original separation, and remains of the primitive cartilage, are readily discernible.

The exoccipitals are still distinct from the supra- and basi-occipital, and the alisphenoids are only suturally united with the *lingulæ sphenoidales*, which are still large in comparison with the basi-sphenoid, though they very early unite with it. The orbito sphenoid and the presphenoid are completely anchylosed together by the superior root of the former, but the inferior root of the orbito-sphenoid, or middle clinoid process, abuts against the basi-sphenoid. (Fig. 16.)

In the temporal bone—the pro-otic, opisthotic, and epiotic are indistinguishably united into the *pars petrosa* and *pars mastoidea*. The latter and the squamosal are firmly united, but the petro-squamosal suture between the *tegmen tympani* of the former and the squamosal bone is obvious. The tympanic bone, still little more than a mere ring, is firmly anchylosed with the squamosal and with the opisthotic portion of the *pars petrosa*, but the indication of the primitive distinctness of the two latter can be readily traced. (Fig. 15, C.)

Fig. 16.

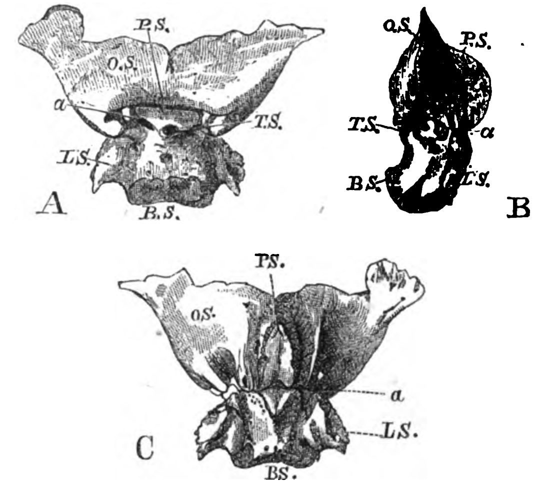

Fig. 16.—The basi-sphenoid and presphenoid, with the orbito-sphenoids of a human skull at birth. A, viewed from above; B, from the right side; C, from below. *T.S.*, *tuberculum sellæ; a*, basi presphenoidal synchondrosis.

It is only after birth, and with the gradual advance towards adult years, that the spheno-occipital and the spheno-ethmoid synchondroses are obliterated, and the vomer becoming anchylosed with the ethmoid, the whole cranio-facial axis is fused into one bone, to which the exoccipitals and supra-occipital, the alisphenoids and orbito-sphenoids add themselves by a similar obliteration of the primitive separations. By addition of bony matter to its free margin, more especially to that of its lower part, the tympanic bone becomes converted into the gutter-like external auditory meatus. The epiotic grows out, inferiorly, into the mastoid process. The cavity beneath the bony arch in which the superior vertical semicircular canal is lodged, at first filled only by a plug of dura mater, becomes obliterated by bone.

The basi-sphenoid acquires larger dimensions in proportion to the *lingulæ sphenoidales*, and the posterior clinoid processes, at first cartilaginous, become completely ossified. The bones of Bertin unite with the under surface of the presphenoid, and the latter becomes almost obliterated, or converted into a mere vertical lamina of bone by the extension of the olfactory chambers backwards to form the sphenoidal sinuses.

The lateral masses become anchylosed with the *lamina perpendicularis*, and form one bone—the ethmoid of human anatomy.

Of the facial bones, the premaxilla is developed within that part of the naso-frontal process which forms the anterior boundary of the mouth. The maxilla, the palatine, and pterygoid bones are produced within the maxillary process—the former from its external, the latter from its internal part. The internal pterygoid is, even before birth, united with the external pterygoid, the latter being simply an outgrowth downwards of the alisphenoid. None of these bones are at present known to be developed from cartilage, and the lachrymal and jugal are, similarly, membrane bones.

The cartilaginous rods within the first and second visceral arches undergo very remarkable changes. That of the first arch becomes modified into an upper portion, the future incus, and a lower portion articulated with this, the future malleus, from which the rest of the cartilage is continued, as "Meckel's cartilage," along the inner side of the visceral arch.

The incudal and malleal portions of the cartilage are, at first, proportionally very large, but their growth soon becomes arrested, and, a centre of ossification appearing in each, they become the incus and malleus. As the root of the first visceral arch is close to the outer and front part of the periotic capsule, so the incus and malleus have a corresponding position, and the tympanic bone, which is developed around the circumference of the modified first visceral cleft, (which becomes converted into the auditory meatus, the tympanum, and the Eustachian tube,) necessarily lies outside them, so th cartilage passes between the tympanic bone and the periotic capsule, in its course from the malleus forwards and downwards. In front, the tympanic circlet marks the limit of its ossification. So far, it constitutes the *processus gracilis* (*Pq.*, Fig. 17), while beyond this point it eventually becomes obliterated. Very early, however, ossification takes place in the membrane of the first visceral arch, adjacent to the middle of the cartilage, and extending upwards towards the squamosal bone, and downwards and inwards towards the symphysis, lays the foundation for each ramus of the lower jaw. The lower jaw, therefore, arises from membrane, and is not preformed in cartilage.

FIG. 17.

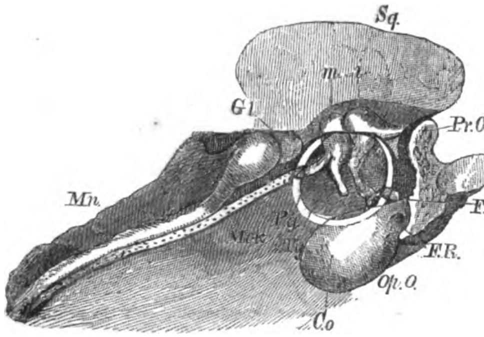

FIG. 17.—Part of the skull of a human fœtus at about the sixth month, dissected to show the auditory ossicles and Meckel's cartilage, *Mck*. *Gl*, the glenoid cavity. The *margo tympanicus* and adjacent parts of the squamosal are represented as if they were transparent, in order to show the position of the malleus (*m*) and incus (*i*). The tympanic bone (*Ty*) is merely indicated.

The axis of the second visceral arch becomes converted above into the stapes, below into the styloid cartilage, the stylohyoid ligament, and the lesser cornua of the hyoid bone, the body and greater cornua of which are developed from the third visceral arch. Between the styloid cartilage and the stapes it is modified so as to form the stapedius muscle. A centre of ossification appears in the styloid cartilage, and, extending upwards and downwards, gives rise to the pyramid and the styloid process.

Some authors, however, give a somewhat different account of the metamorphoses of the cartilaginous axes of the first and second visceral arches to that which I have detailed, and which is based chiefly upon the researches of Meckel, Rathke, and Reichert. Thus Günther (a) while he agrees with Reichert that the cartilaginous axis of the first visceral arch divides into three portions, the uppermost of which (that which is primitively connected with the skull) early disappears, while the middle and lower become converted respectively into the incus and the malleus with Meckel's cartilage, differs from him regarding the origin of the stapes. According to this writer:—"The middle division of the cartilaginous axis applies itself to the vesicular cartilaginous labyrinth, and when it comes into contact with the labyrinth, it sends out a small nodule, which is received by a pit, the future *fenestra ovalis*." The nodule grows out into a process, the lower part of which becoming bent on the upper, and eventually articulated, is converted into the stapes, while from the upper part originates the long process of the incus.

The auditory ossicles are at first altogether outside the tympanic cavity, and as the latter enlarges, its mucous membrane is reflected around the ossicles. The deposit of osseous matter for each ossicle commences in the perichondrium, and the stapes has three ossific centres, independently of that for the *os orbiculare*.

It can hardly be doubted that there is much yet to be learned respecting the first steps in the development of the *ossicula auditus*; but the investigation is one fraught with difficulties.

TESTIMONIAL TO DR. BOWNESS.—The Rainbow Lodge of Odd Fellows have presented their Medical adviser, Dr. R. H. Bowness, of Poulton-le-Fylde, Lancashire, with a valuable testimonial in the shape of a gold watch. Dr. Bowness has been eighteen years Medical officer of the lodge.

(a) Beobachtungen über die Entwickelung des Gehörorgans bei Menschen und höheren Säugethieren. 1842.

INJURIES TO THE EYE FROM MECHANICAL AND CHEMICAL AGENTS, AND THE TREATMENT.

BEING SELECTIONS FROM A COURSE OF LECTURES ON DISEASES OF THE EYE.

By HAYNES WALTON,

Surgeon to the Central London Ophthalmic Hospital, and to St. Mary's Hospital; late Teacher of Anatomy and Demonstrator of the Surgical Operations in St. Mary's Medical School.

Burns and Scalds—Ecchymosis—Chemical Injuries.

THE surface of the eye is subject to injuries from heated liquids, explosions of gas, gunpowder, and other inflammable compounds, and molten metal. It is unnecessary to describe the several states of damage that may be met with after these accidents, varying as they do from simple redness of the parts to charring or calcination. There can be no mistake about the nature or cause of such injuries.

The immediate treatment may be given in a few simple rules, which embrace some particulars in addition to those applicable to like injuries on the general surface of the body.

Sufficient local bathing, particularly with tepid water, as well to soothe as to remove any extraneous material, is first needed. Then a careful search should be instituted to learn if anything has intruded. It is very generally necessary to keep the eyelids closed with a strap of court plaster, and the necessity for it is in proportion to the extent of damage to the front of the eye-ball, and especially to the cornea. In doing this air is shut out. Moisture, and warmth, and quietude are secured. When the edges of the eyelids are likewise hurt, care should be taken to remove the discharges from time to time, and to accomplish this the cilia had better be cut off. I do not think that in the early stage astringent ointments and lotions are necessary; but, on the contrary, that they do harm by increasing irritation. I order a lotion merely when I wish to apply cold, and should a greasy application be deemed requisite, I use pure lard. A strict daily care to cleanliness should be observed. Bodily rest and attention to constitutional symptoms must not be overlooked; for the neglect of them might bring the penalty of suppuration of the eye-ball.

If the vitality of a part has been destroyed, or a wound inflicted, a definite process of repair must be passed through, and which can only be directed or assisted by such means as those mentioned, but cannot be cut short by violent remedies.

As untoward results of these accidents may be named contractions and adhesions,—conditions which are inevitable when any of the conjunctiva is destroyed, or the angles of the eyelids made raw—cicatrisation cannot be fully accomplished without them, and the quicker it can be brought about with the least degree of suppuration, the less will be the defect. A long familiarity with these conditions, and much study of the process of repair, have fully convinced me that the best course is to try to reduce the healing process to the shortest limit, and to attend to the contractions and adhesions afterwards. Fortunately it is very rare indeed that in this description of injury the conjunctiva is much damaged, and therefore contractions do not ensue, nor are adhesions of the eyelids often met with. There is, however, much to be said respecting such distressing after-states, and I think it will be better to reserve my remarks till I speak of chemical injuries to the eye, under which form of accident they are common, and, indeed, inevitable, except where the primary effect is of the most trifling description.

Burns and scalds of the skin of the eyelids are very apt to be followed by very injurious contractions, in consequence of the thinness of the integument and the mobility of the tarsi. It is of paramount importance therefore, even here to accomplish healing quickly, and to avoid the long existence of an open sore. Of all topical applications that I have used, I think none are better than nicely dressed cotton wool. It is soft, light, and cleanly. It ought not to be applied in a lump, but neatly attached in little morsels, and each portion pressed with a probe, and laid smooth and uniform. When the cuticle only is removed, it excludes the air, and sucks up any superfluous secretion. If suppuration should exist, it absorbs any superabundance of the pus, while enough is left for the purpose of sufficient moisture. Under its influence, the sore does not grow flabby and indolent, requiring stimulants, as so frequently happens with water-dressing. The changing of the material is easily affected. Any portion of it that adheres to the sound skin should be wetted, while that on the raw part will readily separate when surcharged with moisture.

Should an astringent ointment ever seem requisite, the Pharmacopœia supplies many to choose from.

If the true skin, the cutis vera, have been much damaged or destroyed, no method of treatment can prevent subsequent contraction, and all that can be done is to shorten the period of suppuration.

When the edges of the eyelids are ulcerated, the special indication is to prevent them from uniting, and this may generally be done by careful daily dressing; but the use of goldbeater's skin, the retraction of the palpebræ, or any other device that ingenuity can supply, should be resorted to if the necessity for it should arise. But when the angles, that is the corners of the eyelids, have become raw, the greatest care is needed to check the attachment. More or less contraction during cicatrisation is certain, and cannot be stopped.

Gunpowder accidents seem generally to take Surgeons by surprise, if one is to judge from the anxious manner in which questions are asked about what is to be done. It has been strongly recommended by some that the process of picking out be adopted. I think that the question of picking them out or not should be determined by the part in which they are impacted, and the position of them. I should leave the skin alone, because only a portion of any individual particle forced into the *cutis vera* can actually be removed from it without taking away some of the texture in which it is embedded. The same remark applies to the conjunctiva. Very differently, however, would I act if the cornea were affected. I should chloroform my patient, and try to remove all that was superficial.

Burns produced by melted metals offer no peculiarities whatever. Lead is almost always the substance, and the slightness of the effect is frequently a matter of marvel.

Ecchymosis of the conjunctiva, as every one knows, is produced by very slight causes, such as the most trivial blow, a cough, a sneeze. Indeed, it is not uncommon without the slightest trace of its origin. It is very persistent, but need not excite the smallest anxiety. Even with tumefaction from extravasated blood beneath, it is not to be dreaded. I fancy that I have seen every variety of this, from accidents and after operations, and I never have deemed it prudent in the worst examples of mere swelling to make incisions, nor have I ever regretted non-interference. I have seen the disadvantages of incisions. My rule is to trust to Nature, and to do nothing except there be pain, or heat, or any discomfort, or other conditions, when I treat the existing symptoms according to the general rules of surgery, using cold, or warmth, or opiates, as may seem necessary, but I deprecate any routine of stimulants or astringents.

Ecchymosis about the eyelids is readily produced in consequence of the superficial position of the bones of the orbit, and the contusion that the skin therefore receives from a slight blow, while the considerable tumefaction which is so common after any blow, is due to another peculiarity of the orbital region—the looseness of the skin. I question whether any means, except gentle friction, can hasten the natural process of absorption. Briony root and Solomon's seal, scraped and made with bread into a poultice, or infusions of rosemary and arnica, are generally recommended. The tincture of arnica and water is the present popular remedy for all bruises.

But it is not, I suspect, a fact, as supposed, that prize-fighters possess means by which to disperse these results of their savage encounters, and I believe they last in them as long as in other people; but as their accustomed personal exhibitions after fights are at night, and by gas-light, most of the colour, especially the lighter hues, are invisible, and hence the popular assumption of the potency of their remedies. If it be true that in them the extravasation is quickly dispelled, it is more probably owing to their youth, and to the perfection of the nutrient and absorbent processes which exist in their high bodily condition.

There does not appear to be satisfactory evidence that depressing the temperature of the surface by frigorific mixtures hastens absorption; and, theoretically speaking, I should rather expect it to retard Nature in her operation.

There are, however, degrees of ecchymosis, some of which demand treatment, and neglect might be followed by injury to the eyelid. The extravasation may be increasing, the infra- or supra-orbital vessels, or other arterial twigs, may continue to ooze, and recourse must be had to pressure, or cold, or the heart's action reduced by the loss of blood, or by a smart purge, and, above all, perfect rest. When the extravasation is considerable, the probability of suppuration is to be borne in mind, and the state of the system must be looked after, and all febrile threatenings attended to. Neither incisions nor punctures should be made with the intention of turning out coagula, for suppuration would be certain to follow. The knife should be withheld unless there is suppuration or erysipelatous inflammation, or sloughing is impending or has commenced. Leeches on the injured part are worse than useless; they do not imbibe coagulated blood, while they add to the local injury. The feelings of the patient must sometimes guide us in the choice of local applications. When the extravasation is considerable, there may be pain, which possibly will be relieved by warm anodyne lotions.

The effects on the eye of strong chemicals are usually so rapid, especially on the cornea, that there is no time for washing or neutralisation. Water ought, however, to be freely employed to remove or dilute any excess of the material that may be about the eye. But reagents are not to be neglected. When an alkali has been applied to the surface of the eye, a good formula for the purpose is that of a drachm of the acetic acid of the London Pharmacopœia to seven drachms of water. Common vinegar may be used. When an acid has inflicted the injury, a solution of the bicarbonate of potash answers well. There can be no danger in making this too strong, as there is with the acid lotion.

When lime or mortar has become attached to any part of the ocular surface, the same diligent watching is demanded, and besides, the entire conjunctiva should be searched to discover any adhering bits. The sinuses of the eyelids must be well inspected.

Water is but a poor solvent for lime; it takes up but a few grains in a pint; and because of this, practical chemistry has been called to our aid, and with such ingenuity, that the unwary student may be excused for supposing that the eye might be held harmless from such injuries. But this alkaline earth spoils the epithelium too quickly for certain effects to be stopped; yet, if a person were seen quickly after the accident, and the several substances that might be made available could be at once procured, there would be greater opportunity to lessen the degree or intensity of action than with most other escharotics. An acid lotion, as above recommended, should be tried. A more effectual way would be to apply a solution of sugar, and to use the acid after. Dissolve one part of sugar in one part of hot water, dilute with an equal bulk of cold water, so as to have the solution lukewarm.

With the lime as lime, the sugar will in great part unite to form saccharate of lime; but with carbonate of lime, which is sure to be present, and will be quickly increased by exposure and moisture, no combination will take place. It is therefore better to wash the eye subsequently with dilute acetic acid, which will dissolve out the carbonate in the form of acetate of lime.

First wash thoroughly in every instance, and then seek for chemical aid if ever there be a possibility of assistance from it.

Having done all that mechanical and chemical skill places within our reach, the after-treatment is to be regulated. The eye must be placed at rest. Hot or cold narcotic lotions, opium ointment, and sedatives internally, and any things that give relief are indicated.

The effects of chemical injuries, especially from lime, now demand notice. Lime is a very common source of accident, that is lime in some form or combination. Weak mortar, though freely applied to the eye, may produce no worse effect than making the cornea cloudy, and from which there might be complete recovery. There are degrees of action according to the strength of the compound, and although at times the cornea may seem to be too opaque ever to be useful, it will recover to a degree to afford good vision. Except therefore there be ulceration or sloughing, much hope may be entertained of considerable repair. When very strong mortar or unslaked lime has been applied, the conjunctiva in its entire thickness is rapidly spoiled, and so is the corneal epithelium, with more or less of the true corneal tissue, and the worst effects ensue. It is only when the dead parts have separated from the conjunctiva, and cicatrisation has well advanced, that the inevitable contraction sets in. At this stage the common practice is to endeavour to destroy the granulations with caustics and escharotics. Even the probe is brought into requisition, and any approximated edges are rudely torn asunder. All this irritates and inflames, increases suppuration, prolongs the healing process, augments the damage, and produces greater contractions. There is no more production of new material than is required for cicatrisation, and the drawing together of the surrounding parts, the mass of which disappears in time, so that the breach is mainly closed by a mechanical process. I am sure that actual adhesion of granulating surfaces is rare, more so than is imagined, and that the contractions are mistaken for it. The occurrence of adhesion would be far more favourable for after-treatment by operation, and, if this be true, should be encouraged. But I make the remark suggestively, and to stimulate to inquiry.

I say, then, use all means, and ensure speedy repair; for the less the wound is irritated the shorter will be the suppurative stage, the quicker will be the healing, the less the contraction, and, necessarily, the fewer the bands and the bridles, and the greater chance will be thereby afforded for rectifying the deformity by practical surgery. The only exception to this rule is that rare condition in which the opposite sides of the palpebral and ocular conjunctiva have been damaged, while an intermediate portion of the membrane, the sinus, as it is called, remains intact, and adhesion is likely to ensue in an isthmus-like form. Persevering attempts must be made by daily dressing and guarding the surfaces with goldbeater's skin and ointment, keeping the eyelid retracted, or by any ingenious plan to ensure the individual healing of each.

While wishing to be most emphatic on abuse of treatment, I am not unaware of the timely advantage of a mild stimulant, or astringent, carefully and neatly applied to an indolent or healthy ulcer; and the only drugs contra-indicated are lead and nitrate of silver. When the cornea is ulcerated or excoriated, lead lotions are inadmissible, on account of the deposit of insoluble sulphate and chloride.

Acute inflammation of the eyeball may come on after any of these injuries, and at any stage of repair.

ORIGINAL COMMUNICATIONS.

◆

A NEW METHOD OF TREATING DISEASE BY CONTROLLING THE CIRCULATION OF THE BLOOD IN DIFFERENT PARTS OF THE BODY.

By JOHN CHAPMAN M.D., M.R.C.P.

It has long been known that the sympathetic nerve, called by Bichat the nervous system of organic life, presides over those processes by which the body is developed and sustained. It stimulates and controls the action of the heart, alimentary canal, genito-urinary organs, and all those processes of growth, repair, and removal of *effete* materials on which the continuous vitality and health of the animal organism depend. During recent years, important additions to our knowledge of the functions of the sympathetic nerve have been made, chiefly by Professor Claude Bernard and Dr. Brown-Séquard, especially with reference to its power of controlling the action of blood-vessels, or what have been termed its vaso motor functions. But as the sympathetic and cerebro-spinal nervous systems are intimately related, and, indeed, in some parts, inextricably and indistinguishably blended, both in structure and function, the nervous influence, whether healthy or not, which is exerted over the several organs of the body, is twofold; hence, when that influence becomes abnormal, either in kind or degree, the most potent method of restoring it to its healthy condition would be by a dual action at once on the sympathetic and cerebro-spinal nervous systems. The Physician who acquires the power of directly controlling these great controllers of the organic functions would immediately obtain the mastery over a large number of diseases. I scarcely dare write the words, "I have done this,"—so momentous are they if true; and yet I believe I have.

I have discovered that a controlling power over the circulation of the blood in the brain, in the spinal cord, in the ganglia of the sympathetic nervous system, and, through the agency of these nervous centres, also in every other organ of the body, can be exercised by means of cold and heat applied to different parts of the back. In this manner the reflex excitability, or excito-motor power of the spinal cord, and the contractile force of the arteries in all parts of the body can be immediately modified.

In order to lessen the excito-motor power of the spinal cord only, I apply ice in an india-rubber bag about two inches wide along that part of the spinal column containing the part of the cord on which I wish to act. On the same principle, the vitality of the spinal cord may be increased by applying hot water and ice alternately, each in an india-rubber bag, if very energetic action be required; if less vigorous action be necessary, I apply ice, or iced water only, using it several times a day, for a short time on each occasion, with a long interval between each application.

If it be desirable to increase the circulation in any given part of the body, this I have found myself able to effect by exerting a soothing, sedative, depressing, or paralysing influence (according to the amount of power required) over those ganglia of the sympathetic which send vaso-motor nerves to the part intended to be acted on. This influence may be exerted by applying ice to the central part of the back, over a width of from four to four and a-half inches, and extending longitudinally over the particular segments of the sympathetic and of the spinal cord on which it is desired to act.

For example, intending to direct a fuller and more equable flow of blood to the brain, I apply ice to the back of the neck and between the scapulæ; increased circulation in and warmth of the upper extremities are induced in the same way; the thoracic and abdominal viscera can be influenced in like manner by applications to the dorsal and lumbar regions; while the legs and the coldest feet ever felt can have their circulation so increased that they become thoroughly warm by an ice-bag applied to the lower part of the back.

The bags I use are of different lengths: of the width already named for adults, and of lesser widths, of course, for children. I have had them made both of india-rubber, and of linen with a surface of india-rubber upon it: the former are the best. The width of the bags is equal throughout, except at the opening, which is narrowed to facilitate tying, and elastic to admit easily the lumps of ice. When the bag is full, I divide it, if a long one, into three segments: this can be done by constricting it forcibly with string; the ice of the upper part is thus prevented from descending, as the melting goes on, into the lower part of the bag. I am preparing a bag on a new principle, which will be a great improvement on those I now use; but as it is not yet complete, I abstain from describing it here. I sustain the bag in the position intended by means of ribbon or tape passed through loops at the back of it, then over the shoulders, and round the body.

Theoretically, I feel assured that by the methods I have described Physicians will be able to control the great majority of diseases; experimentally, I have already received numerous and wonderful proofs that this assurance is well founded. By thus acting, by means of cold or heat, or both alternately or combined, on the spinal cord and ganglia of the sympathetic, I have succeeded in completely arresting the fits of many epileptics, and in curing the following maladies:—Paralysis; long-continued and extreme headaches; prolonged giddiness; extreme somnolence; a feeling of want of firmness in standing and of security in walking; habitual hallucinations; loss of memory; weakness and dimness of sight; ocular spectra; inequality of the pupils; lateral anæsthesia; incontrollable spasmodic opening and shutting of the mouth; cramps of the limbs (in two cases of the hands, incapacitating the patients to continue their work); numbness of the fingers, incapacitating the patient to pick up small objects, or to use a needle; paralysis of the bladder; incapacity to retain the urine more than a few minutes (two cases recovered to a surprising extent); profuse and too frequent menstruation; scanty and irregular menstruation; extreme menstrual pains; profuse leucorrhœa, with long-continued bearing down of the womb, and extreme pain of the back; habitual constipation; habitual diarrhœa; general coldness of the surface of the body which has continued for many years; habitually and hitherto irremediably cold feet.

For the sake of brevity I abstain from discussing here the applicability of the method above described to the several diseases which the Physician is called on to treat; but as many cases of paralysis and a very great majority of cases of epilepsy have hitherto proved incurable, I will in respect to these diseases, and especially in respect to epilepsy, make a few observations, and give the briefest outlines of a few cases, showing the results of my method of treating the last-named disease.

To cure paralysis primarily originating in a lesion, not of the brain, but of the spinal cord, it is necessary to exert a curative influence, not only over the spinal cord, but also over the sympathetic nervous system to the extent of the distribution of its vaso-motor nerves throughout the paralysed limb; to how slight an extent this has hitherto been possible, either by internal medicines or external applications, is too well known to need description here. Assuming the general truthfulness of the doctrines of Messrs. Kussmaul and Tenner, Schroeder van der Kolk, and of Dr. Brown-Séquard, respecting the essential nature of epilepsy, or the proximate cause of convulsive affections generally, we must become still more deeply impressed with the conviction of the necessity of influencing both the cerebro-spinal and the sympathetic nervous system, in order to exert any lasting curative power over that remarkable group of maladies. In Messrs. Kussmaul and Tenner's general summary of the results of their investigations concerning the nature and origin of epileptic convulsions, they say,—"It is probable that certain forms of epilepsy result from a spasm of the muscular coats of the cerebral arteries," and elsewhere they observe that if so, "the central point from which these (spasms) arise would consequently lie in the part where the vaso-motory nerves take their origin, and, therefore, if the results of Schiff's researches be correct, in the medulla oblongata. An excitement of this nervous centre would then be the first link in the chain of these processes, anæmia of the brain, the second, and the epileptic attack the third." Dr. Brown-Séquard, in his "Researches on Epilepsy," after giving his reasons for thinking that "Epilepsy depends in a great measure on an increased reflex excitability of certain parts of the cerebro-spinal axis," proceeds to account for the successive phenomena of an epileptic attack, and, referring to one of the first of them—the paleness of the face—remarks, "We consider it a most interesting symptom, as it leads to a very probable explanation of the loss of consciousness in epilepsy. After Professor Claude Bernard had discovered that the section of the cervical sympathetic nerve is followed by a dilatation of the blood-vessels of the face, I found that when this nerve is irritated by galvanism there is a contraction of these blood-vessels, and I explained the facts discovered by the eminent French physiologist and myself, by considering the sympathetic as the motor nerve of the blood-vessels of the face. I found, also, that the branches of the sympathetic nerve which animate the blood-vessels of the face, originate from the spinal cord with the branches of the same nerve going to the iris. . . . When the excitation takes place in the spinal cord and the basis of the encephalon which gives rise to the fit, the nerve-fibres which go to the head are irritated, and produce a contraction of its blood-vessels. Of course this contraction expels the blood, and in consequence the face becomes pale. . . . We think that at nearly the same time, when the origin of the branches of the sympathetic nerve going to the blood-vessels of the face receive an irritation in the beginning of a fit of epilepsy, the origin of the branches of the same and other nerves, going to the blood-vessels of the brain-proper, also receive an irritation. A contraction then occurs in these blood-vessels, and particularly in the small arteries. This contraction expelling the blood, the brain loses at once its functions, just as it does in a complete syncope."

Though Professor Schroeder van der Kolk differs somewhat from Messrs. Kussmaul and Tenner, and Dr. Brown-Séquard, in maintaining that the abnormal changes constituting the proximate cause of epilepsy are more exclusively restricted to the medulla oblongata than is believed to be the case by those investigators, yet all these distinguished pathologists agree in recognising the very important part performed by the vaso-motor nerves in producing an epileptic fit; and, though they differ as to the relative frequency of the cases in which the medulla oblongata is the primary seat of the attack, they also agree that it is very often the originating centre of the malady. It may therefore be stated that they all concur in the opinion that the proximate cause of epilepsy is twofold, viz., an undue reflex excitability of the medulla oblongata, and an undue irritability of those branches of the sympathetic nerve which are distributed to the cerebral arteries, and which, in their abnormally excitable condition, induce spasmodic contractions of the cerebral blood-vessels, and the consequent loss of consciousness and fall, which usually usher in an epileptic fit. I agree with Dr. Brown-Séquard in believing that different segments of the spinal cord, as well as the medulla oblongata, are not infrequently the primary seat of epilepsy; indeed, concerning the pathology of epilepsy, there is, so far as I know, only one point in which I differ from that profound physiologist and skilful Physician, under whose guidance, at the Hospital for Diseases of the Nervous System, it has been my good fortune to study. It is true that that "one point" is an important one, since, by diverging in the direction I have taken, I was led by a logical process to conceive of the method of curing epilepsy, which, when months afterwards I was enabled to put it to the test of experiment, realised my sanguine expectations. For the sake of brevity, however, in this preliminary statement, I shall avoid discussing the point referred to. My immediate object in touching on the pathology of epilepsy at all at present, is merely to show that while, as I have said, "to cure paralysis primarily originating in a lesion, not of the brain, but of the spinal cord, it is necessary to exert a curative influence, not only over the spinal cord, but also over the sympathetic nervous system, to the extent of the distribution of its vaso-motor nerves throughout the paralysed limb," so, in like manner, to cure epilepsy it is necessary to exert a curative influence not only over the spinal cord, including the medulla oblongata, but also over the sympathetic nervous system, to the extent of the distribution of the vaso-motor nerves throughout the encephalon.

In treating paralysis according to the method above described, my first effort is directed to the spinal cord, which I endeavour to restore to a healthy condition by increasing or diminishing the circulation of blood in it. I effect either of these results by directly modifying its temperature. Moreover, as fibres from the ganglia of the sympathetic are distributed to the sheaths and blood-vessels of the spinal cord, it can be influenced by cold and heat not only directly, but indirectly by acting on those ganglia. The restorative power which I have been able to exert in this manner is truly surprising, and, I believe, quite unparalleled by any influence ever exerted by Medicine.

If the paralysed limb be cold, my next object is to increase the circulation in it; this I do, as already said, by lessening the vaso-motor power of those ganglia of the sympathetic which preside over the blood-vessels of the limb in question. In this manner I find that the circulation in it can be so increased as to make it even very unpleasantly hot.

The health of the spinal cord having been improved, and the circulation and consequent nourishment of the paralysed limb having been adequately increased, I then, and not until then, apply galvanism to the paralysed muscle, if this aid seems needful. When thus applied, after the cord and limb have been acted on as described, the affected muscles prove far more rapidly responsive to the galvanic stimulus than paralysed muscles usually are, and recover their natural size and strength with proportionate rapidity. But in fact such is the health-giving influence of the processes I have described, that the limb will generally recover its healthy condition without the use of galvanism at all.

The treatment thus described has reference to those forms of paralysis originating in a lesion of the spinal cord; but I have found myself able to exert a curative influence scarcely less potent even when the paralysing lesion is within the skull, and certainly far more so than can be exerted by any internal remedy.

I could support these statements by several illustrative cases, but shall only venture to extend this paper by giving a few facts in evidence of the power over epilepsy which my method of treatment places within the reach of the Physician.

In order to cure epilepsy care must of course be taken, in the first place, that all sources of eccentric irritation be removed; assured of this, as far as possible, I direct all my efforts to accomplish two objects—first, to lessen the excito-motor power of the spinal cord by lessening the amount of blood circulating in it; and, second, to prevent those spasmodic contractions of the cerebral arteries which induce the sudden loss of consciousness constituting the first phase of an epileptic fit. To achieve these objects, I order—

First, and most important, ice to be applied to some one part or to the whole length of the back, and from two to eighteen hours a-day, according to the special character of the case under treatment.

Secondly, if the extremities be cold, to aid them in recovering their wonted warmth during the first day or two of treatment—by frequently immersing them in hot water, and by friction, also, in winter, by clothing the arms, down to the wrists, and the legs, down to the ankles, in flannel.

Thirdly, as auxiliaries (1) to take abundant physical exercise, and to use dumb-bells when practicable, or other special means of increasing the respiratory activity and of expanding the energy of the spinal cord; (2) so to cut or dress the hair that it shall not cover or keep warm the upper part of the back of the neck; (3) to exercise the brain daily and systematically in some healthy study, or, if this be impracticable, to ensure regular mental activity by means of some interesting employment; and (4) to take care that the dress along the centre of the back be light and cool.

If ice be properly applied to the back, the extremities, however cold, may be made quickly warm, so that in many cases the use of hot water may be wholly dispensed with; but in severe cases, where immediate derivation of blood to the extremities is urgently required, and more especially in winter, it is expedient to accelerate the influence of the ice applied to the sympathetic ganglia by the means just indicated.

The results of this method of treating epilepsy are exemplified in the following cases:—

Case 1.—A man, aged 42, began to have fits in 1854. During the twelve months previous to the beginning of my treatment (May 16) he had, on an average, three fits of about twenty minutes' duration daily; since I began to treat him he has not had a single fit.

Case 2.—A girl, aged 17, began to have fits when between 13 and 14 years old. Has been accustomed since that time to have two little fits (*le petit mal*) daily. I began to treat her February 24, 1863. These little fits immediately became less pronounced, then having gradually lessened in number ceased entirely at the end of the first week, and have never recurred.

Case 3.—A girl, aged 14. Has had fits, chiefly little ones, about six years. She becomes unconscious in each fit, but does not fall down. When I began to treat her (April 23, 1863) she was having fits at the rate of about four in each hour during the day, besides several each night. Each fit lasted from three to five minutes. The night fits ceased entirely in the middle of May, and the day fits, which now do not last above two or three seconds of time each fit, have declined at the following rates:—

Total number of fits during the week ending	May	1	50
,, ,, ,,	,,	8	65
,, ,, ,,	,,	15	47
,, ,, ,,	,,	22	37
,, ,, ,,	,,	29	26
,, ,, ,,	June	5	11
,, ,, ,,	,,	12	10
,, ,, ,,	,,	19	8
,, ,, ,,	,,	26	5
,, ,, ,,	July	3	6
,, ,, ,,	,,	10	2

Note.—During the week ending May 8, the patient suffered much from toothache, and at length had two teeth drawn. Hence, I believe the fact that she had more fits that week than the previous one.

Case 4.—A girl, aged 20; suffers from falling fits of the ordinary kind, lasting about three minutes each, from little fits, which she calls her "jerks," and in which she becomes unconscious, but does not fall down, and from a frequent quivering of the lips, which is a serious impediment to speech. Of the falling fits she usually has a large, but uncounted number each month. In April last she had them continuously one after another throughout each day during a week. Of her little fits or "jerks" she usually had ten in each of the six days of her catamenial period, and one during each day of the interval. The quivering of the lips is a constant trouble. I began to treat her May 27: since that time she has had one falling fit, lasting about three minutes, and two lasting but an instant each; and since June 15, excepting one little "jerk," without losing consciousness, she has had no jerking fit, no quivering of the lips, and no abnormal symptom whatever.

Case 5.—A boy, aged 13. During the last twenty months has suffered from falling fits, and what his mother calls "stagnation fits," in which he becomes unconscious, but does not fall. On an average he had, until I began to treat him, about fifty of each kind of fit during each month. He came under my care June 4. Since that date he has had only one falling fit, which was induced by his brother, who made him angry, and has had no little fit whatever.

Case 6.—A boy, aged 14, in the habit of having an average of twelve fits daily, each preluded by a shriek. I began to treat him June 11. On that day he had four fits, but each of them without a shriek. Since that day he has not had a single fit.

NOTES REFERRING TO INVALIDS WHO ARE ABOUT TO PROCEED UP THE NILE.

By A. LEITH ADAMS, M.B., 22nd Regiment.

The following stray memoranda are not intended to furnish any new information on the climate of Egypt, a subject already carefully investigated by Drs. Barclay, Spencer Wells, Dalrymple, Cumming, and travellers such as Rhind, Chabrol, etc.; their aim is simply to record the results of casual observations made during a tour in Egypt—in other words, an attempt, in a short space, to point out what it appears to me the patient ought to do, and what he ought not to do, in a country where the habits and requirements of Europeans are little understood even by the few foreigners and natives brought into immediate contact with them. I have, moreover, an idea that although the numerous excellent books and meteorological papers, etc., by various travellers, supply very valuable information on these points, there is not exactly in any one of them, or indeed anywhere that I can discover, that which can enable the Medical adviser to recommend such measures as are best calculated to secure the full benefit of the climate of Egypt, for it is surely no insignificant part of his duty (when he has decided that this climate is requisite for his patient) to be enabled, at the same time, to warn him against the evils usually incident to sick travellers in the East, and to put him on his guard with reference to whatever obstacles are likely to interfere with the cure of his disease.

That the following notes will appear meagre in these respects I have no doubt, but if they afford any information to those interested in the subject, my end will be fully attained.

The well-deserved repute Egypt has gained of late years as a winter residence, in particular for phthisical patients, is of such a high character that no Medical man who has made the voyage up to the second cataract, and noted the advantages of the climate and capabilities of the country, but must long for the time when Egypt will become more accessible to the generality of invalids.

All experience tends to show that about the middle of October is soon enough for the invalid to make his appearance in Egypt, and the middle or end of April ought to see him clear of Alexandria. Three different descriptions of persons visit the Nile during the winter months: 1st. The healthy, for pleasure. 2ndly. Patients suffering from general derangement of health, but only in a degree which does not absolutely require a companion. I would remark at the outset, with reference to this second description of person, that as he may often go to Egypt alone, and trusting (perhaps on the score of economy) to be able to join a boat party at Alexandria or Cairo, he cannot be too discreet in making his choice of companions, and ought to see that he does not join those who are going for mere pleasure and amusement. I am aware of grievous injury having arisen to delicate young men in consequence of having overtaxed their strength in this way.

The European Hotels in Alexandria and Cairo have been remarked on by all Medical writers as being very comfortless, and my experience is the same. The cheerless and dirty condition of the Alexandrian hotels ought to render the invalid's stay a short one, and (unless, perhaps, being in general quieter, and more removed from the din and bustle of a crowded city) those of Cairo are little better. No class of people are more sensible of the defects of the Egyptian hotels than the overland passengers, who have all one story to tell of the bad arrangements at present in force. Speaking in a sanitary sense, to the many invalids homeward bound from India, I can conceive nothing more trying, or more likely to aggravate their condition, than the tedious railway journey and stoppage at Cairo. The former might, with proper management, be curtailed to nearly half the time at present expended, and a proper refreshment-room at the Cairo station would render it quite unnecessary for the traveller to make any further stoppage between the Mediterranean and the Red Sea.

To return to our subject. On arriving at Alexandria, the invalid has three ways open to him, either to take a boat and proceed up the river at once, or to choose a boat, but engage it from Cairo, proceeding thence by railway. There are, however, abundance of boats at the latter city. Perhaps, on the whole, the better plan for those in a really weak state is to hire neither dragoman or boat until they arrive at Cairo.

With reference to the first, it is of essential importance that a man of reputed good character should be obtained, and it would be well if the invalid could discover beforehand the names of the best Maltese and Egyptian dragomans. The dragoman need not, however, be definitely engaged until the boat has been fixed upon, which ought to be inspected with care, to see that the *Satara* (outside curtain) covers all the windows, and that the glass and lattice windows fit properly, and the furniture is complete. Boats are greatly to be preferred which have a canopied and cushioned seat outside, in front of the saloon; there the invalid can sit when the wind or sun prevents his going on deck. This arrangement is invaluable, and especially during the cold northerly winds in January and February. The crew, averaging from ten to fourteen, ought, with the exception of the cook-boy, to be strong, able-bodied men. On these seemingly trivial points much of the comfort of the invalid will depend.

There are different ways of hiring boats; first, by the trip, *i.e.*, arranging with the dragoman to take you at a fixed price to and from the first or second cataract, allowing a certain number of days to see the antiquities, etc., on the way. By this plan the traveller selects the boat, but he is left entirely at the mercy of the dragoman, whose interest is, of course, to get through the journey as soon as possible. I never should recommend this procedure but to the strong, or, in fact, any plan which does not make the invalid master on board. Secondly, by hiring the boat and provisioning it oneself. This is a troublesome business, and cannot be performed but by those who are accustomed to travelling in that particular way, or are disposed to take the trouble and have the requisite strength to enable them to make arrangements with the merchants in the bazaars. Thirdly, the dragoman, to undertake the whole business at so much a head per day, and on the whole, considering the usual run of these persons, and cooks, this is unquestionably the most desirable plan, at the same time it ought to be especially noted in his contract, that unless at the usual stated places, where the crew replenish their stores, he is not to require any delay on his own account. The invalid of course will communicate with the dragoman, as to the articles he desires, and it would be well to see that they are on board before sailing. All European provisions, such as wine, beer, preserved meats, sago, etc., are procurable at Cairo, at high prices, which influence of course the dragoman's rates. There are few treatises on Egypt which do not detail pretty fully the probable expenditure of the Nile voyage, now, unfortunately, becoming more and more expensive, so much so, as to make it a matter of grave consideration with the Physician when he finds it advisable to recommend the climate to his patient. The items of travelling expenditure to Egypt and hotel charges may in general be put down at the same rate as in Europe. The Nile voyage may be reckoned for a party of three at from £100 to £120 per month. Of course it may be done for somewhat less, and there are gradations according to the scale of comforts required.

In making arrangements with reference to messing, the invalid ought not to omit the *geshteh*, the Devonshire cream of the East, if it agrees with him. It is especially nutritive, and should form part of his breakfast, where it might be a substitute for the native butter, which is not to be recommended.

The healthy as well as the weak are subject to diarrhœa on arrival in Egypt, a circumstance all experienced observers have also noticed with reference to other countries. The change from the daily routine and established habits have very much to do with it, and of course persons of a weak digestion are apt to have one or more of their symptoms aggravated. In the East the Nile water is looked upon by many as the great cause, but few think of the other adjuncts, such as divers cooked articles of food, fruit, etc., to which they have not been before accustomed, and which the sharpened appetite of the new comer is apt to indulge in unusual quantities.

The Physician in my opinion can recommend no better advice to his patient on this head than that so lucidly described by Sir James Clark in his admirable work on climate; I would moreover advise that the invalid should live sparingly for the first few days, and imitate as much as possible the food and cooking to which he was accustomed previously, being at the same time careful to notice the first signs of derangement in digestion; with these precautions I think he may safely drink the cool and delicious water of the Nile. The Physician will do well to find out from his patient, before finally deciding on the Egyptian climate, that he is not one of those idle, cheerless, and unhappy beings who has no resources within himself. To such a person the Nile voyage will soon become tedious, and most likely unprofitable. This is more especially the case with certain dyspeptics, who frequently find themselves worse instead of better at their journey's end; indeed, those in rude health who have no active pursuits, mental or bodily, soon get tired of the monotony of the Nile boat-life, and the humdrum existence which savours little of the enjoyment of society; nevertheless, he who can combine instruction with amusement, need never know a dull moment.

Although the river scenery is constantly changing, there is often considerable sameness; at all events, a supply of books is a desideratum. The naturalist may

> "Converse with Nature's charms, and view her stores unrolled;"

the draughtsman will have ample scope for his pencil, and may feast his fancy among the noblest of old world ruins. The latter can easily be visited on donkeys, a gentleman and a lady's saddle being usually part of the dragoman's outfit. There is a caution, however, that ought always to be given, which is, Beware of the cold mephitic air and draughts in many of the temples and tombs. Aboo-Simbull, in Nubia, and the Tombs of the Kings, at Thebes, ought not to be visited by phthisical patients, especially persons subject to bronchitis. With reference to clothing, it is essential that the invalid be supplied with changes of both light and warm descriptions; these he may require to don and doff often twice during the day.

Unless well wrapped up, and under an awning, it is not advisable for very delicate invalids to leave the saloon after sunset. During November and the three following months dew falls profusely at night all over the valley below Thebes, commencing at 9 p.m. It is, however, usually dispersed before 9 a.m., and, in the shape of fleecy cirri, floats at high altitudes in an otherwise clear and delightfully serene atmosphere. In Nubia, as the cultivated tracts disappear and the desert approaches the river, the dew all but vanishes, and thus, after passing the first cataract, the climate, from being more or less moist, becomes exceedingly dry. Before starting, it will be well to hang about in the river for a day or two, to see that "all is right," and especially that the boat is made comfortable and the provisions safely on board. Some invalids sail at night when the wind is favourable; but, as time ought to be no object, the preferable plan, I conceive, is to halt at 9 p.m., and start after breakfast. By this means he enjoys the scenery, and is saved the annoyance of a "creaking helm" at night. The boat ought always to be placed so that the morning sun will shine on one of its sides for two hours before the invalid arrives in the saloon, the lattice windows of which have been opened and the satara coiled up at sunrise. The object of this is to dispel the sharp morning air, which to some may appear an insignificant proceeding, but I feel persuaded that no invalid with susceptible air-passages, who has once experienced the raw, comfortless feeling of getting out of bed and dressing with an Egyptian north wind blowing upon his boat, but will appreciate the above recommendation. Again, on the downward voyage, when the north wind blows, cover the stern windows with the satara, and allow the boat to drift end on with the stream, whilst the patient sits in his sheltered seat under the verandah, in front of the saloon. I have a vivid recollection of a case of tubercular disease of the lungs very little benefited by the Nile voyage, from the patient not having been instructed beforehand to see to many of the little details I have just mentioned. A comfortless boat, without an outside curtain, full of draughts from badly-fitting doors and windows, obliging the invalid to shut herself up during windy weather, or even take to bed, is enough to spoil all the good intended. I was not therefore surprised to be told by the above patient that the "Nile had done her no good;" and I dare say long before this, the Medical adviser in England has been told so likewise, little knowing that his patient went the wrong way to obtain the desired benefits of the climate. Here and there, up to the second cataract, we notice the grave of some poor patient, who would have done better to have stayed at home. Such cases are not frequent, however, and although they have often been put down to injudicious advice on the part of the Medical adviser, it is well known in all countries frequented by invalids, that great numbers of patients will persist of their own accord in making pilgrimages to such places, when at the best they can only be "hoping against hope." The grand advantage of the Egyptian climate in winter is its daily serenity and sunshine; however strongly the wind may blow, a sheltered nook, after 9 or 10 a.m. will always be a sunny one. To those therefore with susceptible air-passages, it is a matter of no little importance to be aware of this circumstance, and able at the same time to have certain simple measures at their own command, which will modify, in a great degree, the deleterious influence of the weather. There can be little doubt that the climate of Upper Egypt, Nubia, and the desert, from their superior dryness, are better suited for the generality of tubercular patients than that of the Delta and the cultivated tracts of the low country. Much, however, depends on the morbid changes which have taken place, or are in course. But Nubia appears to me the climate, of all in the Nile Valley, between Alexandria and the second cataract, that is most likely to agree with phthisical patients, to many of whom the sharp and bracing air of the desert is too strong. Accordingly, I would recommend the patient, if he feels benefited by the voyage on arrival at Asowan, to push on to the second cataract, and tarry as long as the weather will permit. He may return to the first cataract towards the end of February, and *bask* for a few days in the sunny creeks, among the rapids; there he can enjoy fine scenery, and a delightful climate. If he is able and inclined to stroll through Philæ's interesting ruins, the boat may be anchored in the sheltered nook, just under the noble old temple of Æsculapius,—methinks no unsuitable place for him who feels the better for his Nubian tour;—*more poetæ Venusiani*, he may even sacrifice a cock!

In concluding these stray notes, in common with those who look on Egypt from a Medical stand-point, I cannot help expressing a hope (however impracticable it may at present appear) that when the resources of the "land of plenty" have been fully developed, when the talked of Central Egyptian Railway has been completed (not the Suez Canal!), we shall see European dwellings among the palm groves of Sioot, Thebes, Asowan, Streeni, Wadee, Halfih, etc., and hundreds of weary souls gaining new life and vigour from the climate of sunny Egypt; that, however, implies a state of civilisation, which is never likely to be attained, so long as a Moslem is seated on the throne of the Pharoahs!

VACCINATION: ITS USE AND ABUSE.

By BENJAMIN GODFREY, M.D., F.R.A.S., etc., etc.

It is necessary for the welfare of our race, and for the prevention of a terribly fatal disease, that the subject of vaccination should be carefully examined. The public are so alarmed at the report of several cases of death after re-vaccination, that some thousands already doubt the efficacy of this wonderful discovery, and will not permit either themselves or their children to be vaccinated. Now, it is not right that such a boon as vaccination should be lowered in the estimation of the people. They should feel as well as know that it is the best remedy known for the prevention of small-pox.

If the compulsory vaccination law is to be effective, the public have a right to demand that the vaccinators shall use all the means known to ensure its right performance with pure lymph and in a perfect manner. With this view I venture to lay before my readers a few practical hints upon the subject.

Its use is most assuredly to prevent small-pox, and when thoroughly performed is a specific, that is, if pure vaccine be put into the system, reproduced in the vesicle, and then absorbed into the body. Anything that prevents the due fulfilment of either of these things prevents perfect vaccination. A scar upon the arm is no proof of vaccination, for if the lymph reproduced into the vesicle be let out either by accident or puncture, the subject is not vaccinated. After the eighth day a parent lifting her babe from the cradle may press the arm and squeeze out all the vaccine, or it may be removed by pressure upon the bedclothes; there would still be a scar but no vaccination. My plan is to vaccinate *one* arm in *four* places; a parent can protect one arm easily, but not if both be done. If three vesicles at the end of the eighth day have taken, I puncture one only, and leave the others to be absorbed.

A little aperient medicine should be given at that time, to prevent skin disease developing or excessive inflammation. I generally give an infant three months old four grains of rhubarb at bed-time on the eighth night, and one grain of citrate of iron, three times a day, for four days after. If there be any skin disease latent in the system, vaccination, like a kind friend, brings it to light, that it may be cured.

We Medical men have not been particular enough in two things—First, in the choice of vaccine; and secondly, in the length of time it has been kept.

Vaccine, if dry, whether on glass or points, ought not to be kept longer than five days. It is prone to absorb moisture from the atmosphere, and decompose, and then it is no longer lymph, but a poisonous irritant, and, if vaccination be performed with such vaccine, phlebitis or erysipelas may occur.

Vaccine should be kept in capillary tubes only. Arm to arm vaccination is the best; next to that capillary tubes. These tubes are made simply by heating a piece of glass tubing in the flame of a spirit lamp, and, when red-hot, pulling the two extremities apart, thus a long capillary tube is formed, which can be cut into the lengths required. To fill these tubes, simply puncture the vesicle, and as the lymph exudes place one in the fluid, it will fill by capillary attraction, and then requires only to be sealed by the spirit lamp or candle.

The Age of the Child is Important.—From three to four months old is the best time to vaccinate an infant, because then the inflammation on the eighth day is so slight, that pus is rarely formed. Pure vaccine should, on examination under the microscope, exhibit no pus cells or blood corpuscles; if it does, at once reject it. It is not well to take lymph from any child over twelve months old. Never take it from an adult. The perfection of vaccine is seen in an infant four months old. In a grown-up person or in a child, the inflammation on the eighth day generally produces pus in the vesicle, and sometimes is really quite a pustule in the place of lymph. Hence if another be vaccinated with such a material, he will be poisoned instead of vaccinated. I have seen several cases of so-called re-vaccination, but they were in reality poisoned punctured wounds, and erysipelas followed them.

In such cases the persons were not vaccinated at all, and I have afterwards vaccinated them with infantile lymph, and they have taken. If ever I hear from a mother that her child's arm took beautifully, and was inflamed down to the elbow or wrist, and had enlarged glands in the axilla, I know full well that the child has not been vaccinated, because pus has formed instead of vaccine, and has been absorbed into the system.

When taken from the arm is also important. If a child be vaccinated at nine o'clock on a Monday morning, the lymph should be taken away at the same hour on the following Monday. This is necessary, for if the vaccine remain in the vesicle till the ninth day, it becomes vitiated, and loses its potency to reproduce its like.

A clean lancet is the most important of all. No lancet should ever be used for any other purpose than vaccination; a microscopic atom of pus will produce pyæmia; a dry corpuscle of blood will act as an irritant, like a grain of sand in the eye; every lancet should be washed in boiling water with soap before it vaccinates a second person, even of the same family. The blood of one person carried to the arm of another will cause pustulation to follow on the vaccinated spot, and this shows itself often as soon as the following day; therefore, in operating upon a family, the lancet should be washed after each patient. I once vaccinated a family without cleansing my lancet after each; the patient I operated on first took very well, the second rather more, the third angrily, and the sixth had a very bad arm, inflammation extending to the axillary glands, and pustulation to a serious extent following. This is not to be wondered at when we think of the mixture of blood discs from different persons entering into the absorbents. When we consider how minute a portion will vaccinate, so, on the other hand, we see how an invisible particle of foreign matter (for such is congealed blood) will irritate and do harm.

The locality is important. It is a bad plan to vaccinate on the anterior surface of the arm, because it is more richly supplied with absorbents and veins than the outer side, just above the insertion of the deltoid into the humerus is the best place to vaccinate.

I venture to offer these few practical remarks upon vaccination, feeling sure if the Profession would follow out these few suggestions, vaccination would not sink so low in the estimation of the public as it has done lately. We feel anxious that the boon which the renowned Dr. Jenner cast into the world shall not sink like a stone in the ocean of time, but rising above the clouds of prejudice, shall still save many from the direful disease of small-pox.

Carlton House, Enfield.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

GUY'S HOSPITAL.

GUNSHOT WOUND OF THE HEAD—DEATH—AUTOPSY.

(Under the care of Mr. DURHAM.)

In injuries to the skull, especially in gunshot wounds, the internal table is more splintered than the external. This is said by some to be due to the greater brittleness of the inner table, but is ascribed by others to the direction of the fracturing force. In the following case it will be seen that the internal table on the left side, where the bullet impinged after traversing the brain from the right side, was uninjured, but the corresponding external table was starred:—

Jas. W., aged 60, admitted July 9. He was found about nine o'clock lying insensible, with a pistol at his side, and a wound in his head. He was brought to the Hospital, and remained quite unconscious until death, soon after eleven. The scalp was incised over the right temple, and some loose portions of bone were removed.

Autopsy, by Dr. Wilks.—There was a wound through the scalp over the right temple, and a crucial incision made by the Surgeon. On removing the scalp, a hole was seen in the bone, through which the finger could be passed. One edge was smooth, as made by the bullet; the other broken, corresponding to removed portions of bone. In front of this was a fissure, which ran forwards to the palpebral ridge. On the opposite side, just above the temple, and nearly corresponding to the frontal eminence, a star-shaped fracture was seen, about four or five lines, running from a centre, and these one or two inches long. On removing the skull-cap, a jagged hole was seen in the dura mater, corresponding to the bullet wound; and on the opposite side, but a little higher, the dura mater was also torn. The track of the bullet was easily traceable from one side of the brain to the other, through the anterior lobes above the corpus callosum, passing a little upwards and forwards. The passage through the right lobe would admit the finger. In the left lobe, having passed higher and nearer the surface, the brain was merely crushed. The bullet having here met the skull, was projected downwards between the anterior and middle lobes, and there it was found in the fissure of Sylvius, at the base of the brain. The bullet had been driven with much force, as it was lengthened by passing through the barrel, and its end was flattened. There was much blood on both sides beneath the arachnoid, and also on the left side, in the cavity of the arachnoid. There was no doubt that the bullet had struck the skull on the left side, at the point where the external fracture was seen, but there was no fissure internally. The surface of the brain was somewhat atrophied. There was some induration and puckering of the lungs at their apices. The liver was pale and fatty. Except as above noted the body was healthy.

SLIGHT EXTERNAL INJURY TO THE HEAD IN AN EPILEPTIC—INSENSIBILITY WITH STERTOR AND DILATED PUPILS—DIFFICULT DIAGNOSIS —DEATH—AUTOPSY—FRACTURE OF THE BASE OF THE SKULL AND EFFUSION OF BLOOD.

(Case under the care of Dr. WILKS.

Geo. P., aged 46, had been subject to fits, which he had at long intervals, the last about three months ago. On the morning of admission he was at work in his usual health, and was employed in preparing to go out, when, at 7 a.m., he was found lying on the ground insensible, and bleeding from the head. He was lying at the foot of three steps which lead from the room above. The history given by him after this was contradictory; it was said by some that he remained perfectly insensible, and by others that he spoke. It was also said that he appeared paralysed on the left side. When seen in the middle of the day, he was found to be perfectly insensible, with stertor and dilated pupils. His arms and legs dropped when raised, there being no more marked weakness on one side than on the other. His arms were stretched out, and often convulsively moved. There was a slight scalp wound on the right side, and doubtful bleeding from the ear.

The question was discussed whether the symptoms were due to disease or to injury. Effusion of blood was suggested, and an operation would no doubt have been performed had a good history of ingravescent symptoms been obtained.

Autopsy.—There was a small scalp wound not penetrating to the bone. On removing the calvaria, a large clot of blood was seen occupying the right temporal region, between the bone and the dura mater. The mass was the size of the fist. A fissure existed on the right side, running through a large branch of the meningeal artery. This extended down to the middle fossa, and also another backwards to the petrous bone. The brain was much indented by the clot. The middle lobe inferiorly on the left side was much bruised by *contrecoup*. The body in other parts was healthy.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

EPILEPSY FOLLOWING SOME MONTHS AFTER INJURY TO THE HEAD.

(Under the care of Dr. HUGHLINGS JACKSON.)

In this case it is probable that the epilepsy was a consequence of the blow, but it is not nearly so certain as in the next case. In this there was no warning; the patient was convulsed on both sides, and had no incomplete seizures. In the next, the patient had an aura from the hand on the side opposite to the injury, and had been hemiplegic on that side after the injury. He had also abortive seizures. Trephining has been practised in epileptiform convulsions, the result of an injury, and the second of these cases seems tempting, as the primary cause is, or was, no doubt at the position of the depression in the skull. It is probable, however, that the lesion which directly causes the epileptiform seizure is secondary to this, being due to some deeper mischief, as was no doubt the hemiplegia, which came on soon after the accident.

A man, 32 years of age, came to the Hospital for fits of epilepsy on June 17. In January, 1861, he was struck on the forehead by a hammer. He was not stunned, and went on with his work. A lump followed in the position of the blow. It was painted with iodine, but afterwards burst, and subsequently several pieces of bone came away. [There is now a scar, about the position of the left frontal eminence.] Before this he had had good general health, except that, seven years from the present time, he had a chancre, which was followed by bubo, but not by sore throat nor rash. He kept in perfect health until some months after the blow,—viz., November of the same year. He then, without any warning, had an attack of epilepsy. He was at breakfast when the fit came on, but knew nothing of it until his recovery, when he found himself in bed. He did not bite his tongue. Ten months later he had a second fit, again without warning, and in this he bit his tongue. Altogether, he has had about twelve, always in the day, and always without any warning, and has always bitten his tongue except in the first. His wife, who had only seen him in one fit, said that he was convulsed on both sides. He is a healthy-looking, well-built man, and will not admit that he has lost mental or physical power. The only other symptom is jerking of the limbs in sleep.

EPILEPTIFORM CONVULSIONS (UNILATERAL) AFTER AN INJURY TO THE HEAD.

(Under the care of Dr. HUGHLINGS JACKSON.)

A man, 34 years of age, was admitted under the care of Dr. Hughlings Jackson, July 4. He received a blow by a handspike on the *left* side of the head in November, 1861. [There is now a considerable depression, about a square inch, on the left side of the middle line, about the anterior third of the parietal bone.] He at once became insensible, and was so for ten hours. When he regained sensibility he found that his "speech was gone, except to say yes and no," and also that the *right* hand and arm were paralysed. The paralysis continued, so that he could not get out of bed for four months, but steadily improved after that. At the time of the accident he had no convulsions and no discharge from the ear.

Five months after the accident he began to suffer from epileptiform attacks, but had no complete fit until nine months ago. The first seizure began by a tingling in the *right* hand; it then passed, "with a quivering," to the side of the chest, and next down the right leg; next, he said, it passed up to his throat, and took his breath—"he had a difficult job to breathe;" and then, all at once, it passed off altogether, but left a sensation of another kind in the parts affected—what he called a "trembling pain." Of these he had had about eighteen altogether. Then, as stated, he had had, during the last nine months, fits, in which he became insensible. These began in a different way, but he noticed that, about an hour before, he had fits of the slighter kind. The severe fits began by a drawing up of the right hand and arm, and with pain, which he described as being very severe. He has no affection of sight or of hearing, or any other sensation, except drawing up of the arm. Next, he became insensible. He never bit his tongue. Of the severe fits he had had about five or six. There was no notable paralysis, but the right side was somewhat weaker, and he could not write. There was no loss of sensation. He spoke thickly, but not to any great extent.

LIVERPOOL SOUTHERN HOSPITAL.

CASES OF INJURY TO THE HEAD.

[Communicated by Dr. Gulston Wollaston.]

Case 1.—Fracture of the Skull from a Fall—Compression—Removal of Bone—Recovery.

Wm. H., aged 16, was admitted under the care of Mr. Higginson, May 15, having fallen from a scaffold, and received a compound fracture of the right parietal bone,—a piece of bone, about the size of a florin, was lying on the dura mater. Well-marked symptoms of compression were present. The wound in the soft parts having been enlarged (without chloroform), the operation was performed in the usual manner, and the depressed bone removed. The dura mater was uninjured. Antiphlogistic treatment was pursued for some time, and at the end of three weeks the boy was up and about; and is now (June 16) convalescent, and able to resume his ordinary occupation, that of an iron ship-builder.

Case 2.—Fall on the Head—Fracture of the Frontal Bone, with Protrusion of Brain Matter—Insensibility and Convulsions—Operation—Recovery.

C. E., aged 12, admitted May 21, under the care of Dr. Nottingham, for injuries received by falling into the hold of an iron ship. There was an extensive lacerated wound on the left side of the forehead, from which a considerable amount of cerebral substance was protruding. A jagged fracture of the frontal bone existed, the broken portions of bone being buried deeply in the brain matter. He was totally insensible, and was violently convulsed. By means of a pair of long forceps and the finger, three portions of bone were removed, together with a large quantity of the brain substance itself. For some hours after the operation he remained quiet, but towards night he again became convulsed, and continued in this state for three hours, at the expiration of which time, after a fit of vomiting, consciousness returned; he recognised and conversed with those about him, and has continued to progress well up to the present time, not having had a single bad symptom. A hernia cerebri made its appearance on the third day after the receipt of the injury, and has now attained the size of a hen's egg. The only treatment has been low diet and salines, with astringent applications and pressure to the tumour. The boy is now (June 18) up, and walking about, and expresses himself as feeling quite well. Although this boy has lost a large quantity of brain-substance, his friends consider that he is more acute than he was before the accident.

Case 3.—Blow on the Head—Fracture of the Skull in the Left Parietal Region—Trephining—Hemiplegia on the Right Side and Loss of Mental Power—Death—Autopsy.

H. K., a smith, aged 49, of most intemperate and dissolute habits, was admitted under the care of Mr. Hamilton on the 25th November, 1862. It was stated that he had been struck on the head with the corner of a flat-iron. He had a lacerated wound of the scalp over the left parietal eminence, and a depressed fracture of the skull that would just contain the tip of the index finger. He was free from any symptoms of compression. On the same day chloroform was administered, the wound enlarged, and the depressed bone removed with the aid of the trephine. There was some amount of splintering of the inner table, all the loose pieces of which were removed. He was placed on low diet, and a saline mixture administered. Everything went on satisfactorily until the evening of the 10th December, when the patient was seized with convulsions, which lasted the greater part of the night. On the 12th he complained of numbness down the right arm, and on the following day the same symptoms showed themselves in the right leg. On the 16th he had another slight convulsion, and the right side became totally paralysed, and the speech very indistinct. Soon afterwards the dura mater, which was uninjured at the time of operation, gave way, and the cerebral substance began to protrude; at this time also the patient became quite idiotic. Under various methods of treatment he lingered in the same state until the 17th February, when he died exhausted. On a post-mortem examination, the left half of the brain was found to be entirely disorganised and pulpified, while the right side was fairly healthy. The kidneys were atrophied, and there were slight deposits on the aortic valves, with some amount of hypertrophy of the left ventricle. The liver was cirrhosed, and the lungs loaded with much black pigment.

Case 4.—Blow on the Back of the Head—Fracture of the Occipital Bone—Recovery.

J. B., aged 20, a seaman belonging to the Royal Naval Reserve, was admitted April 30 last. He had been struck on the back of the head with a brick, which had produced a scalp wound about two inches in length, and a fracture of the occipital bone, but without depression. A fissure could be distinctly traced running in the direction of the vertex. Feeling quite well, he remained in the Hospital two days only. I saw him again in the end of May, when he stated that he became worse after getting home, and that he had been under the care of an eminent Surgeon in the neighbourhood, but that he was now convalescent. What the symptoms and treatment were after leaving the Hospital I do not know.

Case 5.—Fracture of the Frontal Bone—Insensibility—Trephining—Great Relief to the Symptoms—Subsequent Relapse and Death.

Jas. W., aged 13, was admitted under Mr. Higginson's care on January 8 last. He had fallen into the hold of a ship, a distance of many feet, and had sustained a fracture of the frontal bone with depression. His pupils were dilated, breathing slow and laboured, and he was completely insensible. He was trephined at once, and a large piece of bone removed, after which he rallied and became quite sensible. The dura mater was not injured. No chloroform was given. The next day he appeared somewhat better; recognised and spoke to his friends, and took his food well. The following evening (January 10) he became violently convulsed, and died comatose in the course of the night.

Case 6.—Fracture of the Skull from a Blow—Trephining—Recovery.

P. L., aged 19, a German seaman, was admitted into the Southern Hospital on March 15 in the present year, under the care of Mr. Higginson. There was a scalp wound over the right parietal eminence, about two inches long, from which brisk arterial hæmorrhage was going on. On introducing the finger into the wound, it was discovered that there existed a depressed fracture of the skull, a piece of bone, about one inch by one inch and a-half, entirely isolated, lying on the dura mater. The injury was reported to have been inflicted with a life-preserver. There were no symptoms of compression present. He was put to bed, a dose of calomel was given, and a turpentine enema administered.

At a consultation held a few hours after admission, it was determined, if possible, to raise the depressed bone; if this could not be effected, to trephine. After several ineffectual attempts to elevate, a small tibia trephine was used, and the bone removed in the usual manner. No chloroform was administered, as it was unnecessary to enlarge the external wound. The dura mater was healthy and uninjured. The after-treatment consisted in saline medicines, low diet, and water-dressing. There were no bad symptoms; the wound was quite healed by the beginning of April, and on the 20th of that month the man was discharged convalescent.

Case 7.—Fracture of the Frontal Bone and of the Femur—Operation—Recovery.

Michael S., aged 12, was admitted March 7, 1863, under the care of Mr. Hamilton. On the morning of the above day he fell a height of twenty feet into a graving-dock, sustaining a compound fracture of the skull, and a compound fracture of the femur in its upper third. A piece of the upper portion of the frontal bone, nearly two inches in diameter, was separated, and was lying flat on the dura mater, not, however, injuring this membrane. There were no symptoms of compression. Chloroform was administered. The external wound, which was a small one, was considerably enlarged, and the detached bone elevated and removed. A dose of calomel was given, and the boy placed on low diet. The protruding lower extremity of the fractured femur was drawn into position, and the limb placed on an ordinary long splint, interrupted over the lacerated soft parts. On the evening of the day of admission the boy had one slight convulsion; this, however, was of short duration, and was the only bad symptom in the whole case. At the expiration of a fortnight the wound in the thigh had quite healed; the long splint was removed, and a gum and chalk bandage put on. The wound in the head was healed by the end of April, and on May 9 the lad was discharged cured. I saw him again on June 12; he was quite well; distinct pulsation over the removed bone in the forehead; he was quite able to follow his usual occupation, and there was no perceptible shortening of the fractured limb.

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Medical Times and Gazette.

SATURDAY, JULY 18.

MILLINERS' GIRLS.

The death of the unfortunate girl which has given such unpleasant notoriety to the establishment of Madame Elise, the Regent-street milliner, is likely to be followed by some good results. Society is taking itself to task, and saying with the sons of Jacob, "We are verily guilty concerning our sister." So far as the special case of this poor girl is concerned, we believe that all the accusations which have been heaped upon the head of her mistress of having caused her death by overwork and bad air are perfectly unfounded. A calm investigation of her case shows that most probably she died of brain disease, brought on by mental trouble. She had for some months been engaged to be married, and the day of her wedding was fixed, when she discovered that her lover had a wife and child already. This makes the brain symptoms intelligible; mere want of air does not. The girl was of full age, had been in her situation a long time, could have left it if she had chosen, and was not compelled by poverty to work for a living; and her relatives repudiate all the accusations thrown out against her employers. The truth ought to be established at all hazards; the progress of sanitary measures will not be served by exaggeration.

Society, however, feels that there is a something wrong; consciences are touched, and there is a general inclination to abate the evil influences which were said, although under a mistake, to have caused the death of Miss Walkley, but which are, nevertheless, far too widely in existence amongst us. In order to help on the work of reform, the Ladies' Sanitary Association induced Dr. Richardson to deliver a very thoughtful and philosophical lecture on "Overwork," at a public meeting convened for the purpose, with Dr. Lankester in the chair, who delivered some good remarks on want of air. And there are many persons asking themselves this practical question:—Suppose one of my servants, or apprentices, or children were to die, and a coroner's jury were to see the remains in the bedroom, what would they say of the "cubic feet," and of the accommodation generally? Jurymen are always inclined to bully employers, especially foreigners, and their instincts naturally and laudably induce them to take the weaker side where an unprotected girl is in question; they probably would not be equally severe on a small householder. But if we were all—including the jurymen—to measure the bedrooms of our servants and children, many of us would find that the cubic contents were rather scanty. There is many a small householder, with four or five children, and one or two servants and lodgers, whose sleeping space is much less than that allowed at Madame Elise's. And we suspect that Dr. Lankester would tell no flattering tale of the cubic space available for that part of the population of St. James's which lies to the east of Regent-street.

The provoking thing is, that whilst so much is said about "cubic feet," people seem to forget what Dr. Bence Jones so well showed in his lecture on "Ventilation," at the Royal Institution, that it is not mere space, but circulation of fresh air which is needed. Without this one man would be suffocated slowly in the largest space, and with this many persons may safely occupy a very small space. But as to scientific means of ventilation, or the means of admitting air without draughts, the Ladies' Sanitary Association, judging from their lecture-room, have a good deal yet to learn. There is that capital mode of hanging an open window, which is described by Mr. Bird, which is very little known yet.

There are several districts in which, if servants are sent to Hospitals with diarrhœa or fever, the Medical Officers of Health cause inspection to be made of the masters' residences. Servants, whether they sleep in attics or in basements, are particularly liable to suffer from cold and damp, or from closeness, or from the exhalations from drains and sinks; and it is perfectly well known that even in noble and wealthy houses, where the reception rooms shine with gilding, the men-servants may sleep in some dingy subterranean recess, unvisited by light and air, and a stranger to whitewash.

Now for a few words on overwork, and on the expediency or otherwise of attempting to mitigate it by law-making. What is overwork? It is the consumption, within a given time, of nervous or muscular tissue, in excess of that which is replaced during the same time by food and sleep. It requires to be balanced by proportionate periods of holiday, and by more nutritious food, otherwise it will be followed by disease, or by premature decay, which is the worst form of disease. Is it the interest of society to abate overwork? Undoubtedly; because society must take care of the victims; the tax-payers must provide Hospital or workhouse accommodation, and maintain widows and orphans. But English society, or that part of it to which the making and execution of laws is entrusted, must teach the people to protect themselves by energy and prudence; and, in the next place, must confine itself to what is possible; and we doubt if it be possible to limit overwork, except as regards the labour of some peculiar and defined classes of the community—such as factory children.

Overwork may be habitual, or occasional. The former shows the existence of more workers than are wanted, with the wretched pay which results from over-competition. To remedy this, more work, fewer hands, higher pay, and higher prices, or extensive combinations and strikes, are necessary. We will not enter on this now.

As for occasional overwork, nothing good, or great, or generous can be done without it in any human calling whatever. It is inevitable in the case of occupations of a fluctuating nature. During the London season every one is overworked. The rich people exhaust themselves with pleasure; the religious with sermons and anniversary meetings; the lawyer has his terms and circuits; the doctors have their periods of unusual activity in practice, whilst the Medical Societies and Schools tax the energies of the professors and philosophers; all the hotel and lodging-house keepers and their servants are overworked to attend upon those who come to town to see sights, hear sermons, go to law, or consult doctors; and tailors and dressmakers are overworked in the attempt to supply them with proper clothes. To expect them to put down the overwork of the London season, by a legislative body itself overworked, is simply preposterous. Nay, it may fairly be doubted whether a few months of intense activity, followed by a period of repose, is not, on the whole, a happier and healthier mode of life than one unvarying monotony, without fatigue, but without relaxation.

Granting, then, that occasional overwork is unavoidable, we believe that any one who has practised medicine amongst the middle classes at the West-end of London, and who knows the manner of life of domestic servants, shopwomen, and the indoor apprentices and assistants of dressmakers, milliners, etc., must be aware that there are many points in which their health might be improved not only with no injury, but with the greatest possible benefit to their employers. For instance, bedrooms should be better ventilated. It is absurd, in a town where space is costly, to rave about "cubic feet," or to expect that young persons who go out to get their living should have greater space at an employer's than they have in their parents' own homes. But any small bedroom may be made wholesome by a fire in winter, by open windows in summer, and at all seasons care should be taken to provide a supply of good fresh air to the body and staircase of a house at night; the best mode is by an open trap-door at the top.

On rising, the skin should receive due care. Tubs and water don't cost much, and the time expended on a thorough sluicing would be well repaid by the increased energy it would create.

Every young person should have a mouthful of fresh air, and a little walk before or just after breakfast, to warm the feet in winter before beginning sedentary work.

Fourthly, the breakfast. Little wonder is it that slip-shod girls, coming with unwashed skins from a fetid bedroom, should loathe the common English breakfast—that disgrace to our diet scale. A square baker's loaf, a pat of indifferent butter, weak tea, and sky-blue milk, offer but little of a whet to a poor appetite. Such a breakfast is soon followed by a sense of sinking, languor, emptiness, and acidity.

In many respectable houses it is the custom to serve up in the work-room either junks of bread-and-butter or of seed cake about ten o'clock, to which fruit or Gladstone's claret might be added with advantage. Dinner is usually at half-past twelve, in order that it may be got rid of before carriage customers come. The dinner is usually good in quality, but too monotonous; mutton, bread, and potatoes don't tempt feeble appetites. A meal of tea and bread-and-butter at four, and another of bread and cheese and beer (too often of that kind known as table, or rather lamen-table) wind up the day. It is quite clear that the usual diet has too great sameness in it; especially there is want of fruit, and vegetables, and salads; but these are very dear in London, although we throw our sewage into the sea.

Of course the ventilation of work-rooms is defective, especially in the evenings, when gas is used, and when there are no fires. But ignorance of ventilation is so common, that it is not fair to charge it on milliners or shopkeepers as it were a vice peculiar to their class.

The hours of work are far too long, and most unnecessarily so. Thirteen and fourteen hours a-day, of which three half-hours are taken for meals, are considered moderate. During a press of work the hours are occasionally much longer, but as this is an essential condition of a town business, it cannot be complained of, provided that it is compensated by a fair allowance of holiday. Still the hours of work are habitually and absurdly long. We say absurdly, because all the employers whom we have spoken to allege that the girls always waste their time so much in the morning, that they must work in the evening. Now, if they left off earlier, and got some exercise, and slept in well-ventilated bedrooms, and ate a good breakfast with a good appetite after a wholesome bath, we verily believe that the work would be done better, and more quickly, and leave time for a wholesome walk or dance in the evening. One large employer complained to us that the younger girls did nothing all the morning but yawn and talk about young men, and spoil their work, which had to be picked out and done over again.

Of the two classes, domestic servants and indoor shopwomen, with dressmakers, etc., the former class are the healthier, and, if less dignified, have more freedom and animal enjoyment. Both, but especially the latter, are liable to diseases of debility and mal-assimilation. Still, comparing them with the whole mass of women who have to get their living, their lot is singularly favourable. They have sufferings arising from the ignorance of the class to which they belong as to all sanitary matters; occasionally, too, from employers who are ill-tempered, stingy, thoughtless, or tyrannical; often, too, it is to be feared from employers who are poor, and struggling to make both ends meet. But when we compare their condition with that of the poor creatures who live in their own lodgings, and go out to work, we feel that a good deal of sympathy is bestowed on a class who do not want it. Nothing could be more disastrous than to deter respectable householders from taking in young shop and work women as inmates. So far about milliners' girls, and what may be called "season" or "occasional overwork." We shall have something more to say about women labourers in general, and their "habitual" overwork.

THE WEEK.

ATTEMPTED PROSECUTION OF AN APOTHECARY FOR REFUSING TO MAKE UP A PHYSICIAN'S (?) PRESCRIPTION.

A RATHER singular information under the Apothecaries' Act has been brought before the magistrates during the past week at Durham:—

"Mr. William Cuthbert Blackett, Surgeon, of the North-road, in the Borough of Durham, was charged that he, on the 4th July, then being a person using and exercising the rights and mystery of an Apothecary, did, on the day and year before mentioned, and within twenty-one days from the date hereof (to wit), on the said 4th day of July instant, knowingly, wilfully, and contumaciously refuse to make, mix, and compound a certain prescription signed with the initials, in his own handwriting, of one Robert Henry Spencer Carpenter, the said Robert Henry Spencer Carpenter then being a Physician legally licensed to practise Physic."

The complainant had intimated a wish to withdraw from the prosecution, but the defendant's counsel objected on the ground of the novel nature of the case, as, "to his knowledge, a similar case had never been brought before a court in England for the last thirty or forty years." Also:—

"He objected to the withdrawal of the case on the ground that complainant was not a Physician. Further, that he was not entitled to claim the benefit under the Apothecaries' Act of 1815, he being merely a licentiate or extra-licentiate of the College of Physicians, created within the last two or three years. Thirdly, complainant being an Apothecary himself, had no right to call upon another Apothecary to dispense his prescription. Had he been a member or fellow of the Royal College of Physicians of London, they were prohibited by law from compounding their own medicine; and as such Mr. Blackett would have been compelled, as well as any other Medical man, to have made up and compounded these prescriptions. This was no ordinary case. Mr. Blackett's character was, to a considerable extent, involved in it; and he thought the complainant hardly knew the injury he had inflicted on his client; for, as he had pointed out, the statute under which the charge was preferred was a very penal one. The question was whether the summons was to be withdrawn at the whim and caprice of the complainant, without some proper and suitable apology being made by him; for he was fully prepared to meet the case on the part of his client. Mr. Carpenter had taken upon himself to issue a summons against a fellow-practitioner, from what he could not but regard as from malicious motives; and he thought that the bench would never allow themselves to be made the 'catspaw' of Mr. Carpenter, and an object of persecution to a respectable individual like Mr. Blackett. He boldly charged Mr. Carpenter for taking out the summons from malicious motives, and not from any desire to promote the public good. Mr. Carpenter was not a real doctor, and was not entitled to that designation; and he contended that, had Mr. Carpenter really required the compounding of the prescription, he had no occasion to ask Mr. Blackett to do it. He objected to the withdrawal of the summons on the part of the complainant unless he would publicly avow to the court that he was wrong in issuing the summons, and that it was issued from malicious motives;—which, however, he would hardly expect him to admit;—or unless he avowed publicly that the summons was issued against Mr. Blackett without any reasonable or legitimate ground for so doing."

It appeared that Mr. Carpenter thought he was justified in taking out the summons as a Licentiate of the College of Physicians; but the presiding Alderman said the bench could not shut their eyes to the fact, that, considering the terms on which Mr. Blackett and Mr. Carpenter stood, it was hardly proper for him to send to Mr. Blackett to get the prescription made up. Defendant's counsel here quoted from a case heard before Vice-Chancellor Sir Page Wood, in 1861—the Attorney-General *v.* the College of Physicians, London. The Vice-Chancellor said:—

"But the licensee is really a gentleman in a new dress never contemplated by the Legislature at all; he has been taken from the apothecaries' body, and trained up as a Physician for the purpose of imposing on the Legislature."

This was strong language applied to such men as Mr. Carpenter. Mr. Carpenter must have known of such a case, and the language the Vice-Chancellor had used on the occasion. He therefore expected an apology, as well as a simple withdrawal of the action, a course in which the Court appeared to coincide, and which was ultimately adopted.

As it appeared incidentally in the proceedings that Mr. Blackett was not the person to whom the prescription should naturally have been sent, it is to be feared that a suggestion of the Recorder, "that it was a trap to catch Mr. Blackett," is not without foundation. It is to be regretted that a Professional man should have condescended to so unjustifiable a course towards one of his brethren; and still more to be deprecated that the new regulations of the College of Physicians should be perverted into means of offence and annoyance in the disputes of neighbouring Practitioners.

HORGAN *v.* FLYNN.—FEES TO MEDICAL WITNESSES.

THE question of Medical fees for attending in courts of justice received some illustration from a case which occurred at the Drogheda Quarter Sessions a few weeks ago. Dr. Horgan, of that town, sued a Mr. Flynn for £22 1s., alleged to be due as fair remuneration in attending six days at the Court of Exchequer in Dublin, as a witness. A special contract between the parties for the sum of £3 3s. daily was claimed by the plaintiff. His Profession was also considered to entitle him to a high scale of payment. 10s. 6d. a-day was claimed for travelling expenses. It appeared he had been subpœnaed by both sides, and had in conversation with the defendant mentioned more than once his expected fee. Dr. Ellis was similarly summoned, but his attendance was dispensed with by telegraphic message The action was one of seduction, and appears to have been settled out of court. The defence presents most features of interest to Medical men. The counsel stated:—

"Regarding the case now before the jury, he submitted to his Worship that in point of law the charge sought to be made by Dr. Horgan was not one warranted by law. He was not seeking to detract from Dr. Horgan and the position he holds. He had not one word to say against Dr. Horgan himself; but what he did mean to say was, that it is a thing unknown to the law of this country that a Professional man, simply because he is a Professional man, is entitled to such excessive remuneration as was now claimed by Dr. Horgan. There is a distinction, and a very proper distinction, between Medical men and Professional men subpœnaed to give evidence upon matters of skill, in which they are called experts; but that never could apply when a Medical or Professional man is summoned to prove a fact which may be within his knowledge, but having no connexion with his Professional skill. In this case he readily admitted that Dr. Horgan was entitled to his expenses—reasonable and fair expenses—but to nothing more. His claim was not for any benefit he had rendered in the way of his Profession, and he (Mr. Hamill) believed that the amount he had already received, together with the amount lodged in court, was amply sufficient pay for him. He had already received 11s., 10s. of which he admitted had not been given by them, and £2 13s. was now lodged in court, which would amount in all to three guineas for his six days' attendance. That was about 13s. or 14s. per day, and would be allowing 6s. 6d. for his fare to Dublin and back, and another 6s. 6d. or 7s. to cover the expenses of his hotel. Then the simple question for them was—is a Physician, called to prove a fact, entitled to anything more than his expenses, as any other witness in the action? The action was one for seduction. Dr. Horgan's evidence was that he had not seen this person for six or seven months previous to the time of her confinement, and that he knew nothing of the facts except one—'that he was sent to see her by Mr. Flynn.' That was the only simple fact he was called upon or was able to prove, and therefore it was not a matter of opinion or skill on his part, but a matter of mere fact, and consequently he was entitled to nothing more than any ordinary witness."

It affords some satisfaction to see that this gentleman, himself a Professional man, clearly recoils from enforcing the beggarly bargain which his instructions involved; for in a subsequent part of his address he plainly hints at more reasonable terms, although he forcibly, and as it seems to us truly, points out the nullity of the implied contract.

"He" (Dr. Horgan) "claimed three guineas a-day for loss of time for six days, which just amounted to eighteen guineas. He charged this upon two grounds—first, upon the ground of its being a fair charge to which he was entitled, and then upon the ground of a contract made by Mr. Flynn, the defendant, with him. With regard to that, there was no evidence to satisfy a jury that Mr. Flynn ever agreed to pay him anything at all for loss of time. No doubt there was evidence that Dr. Horgan stated in Mr. Flynn's presence that he expected this; but there was no evidence of a single word from the defendant consenting or agreeing to it. Dr. Horgan was attending, not in pursuance of any contract between him and Flynn, but because he was bound to do so by the subpœna. He was obliged to go in obedience to that, and the jury should bear in mind that the conversation between Dr. Horgan and Mr. Flynn did not take place in Drogheda, but it took place in Dublin, after he was obliged to attend on the subpœna with which he was served. He then gets into a conversation, in which he says to Mr. Flynn—whose mind probably was engaged rather with the ultimate result of the trial then pending—'I expect to be paid three guineas a-day, and my expenses.' Now Mr. Flynn made no reply, and what the jury was called upon to believe by Dr. Horgan's advocate was, that because one man says something and another says nothing, that is an agreement to pay. The good sense of the jury would rebel against that. The simple question now to be left to the jury was, whether or not there was any such special agreement, and if not, what they would consider a fair price to pay the plaintiff?"

The presiding justice stated, in summing up, that the shilling given with the subpœna did not bind Dr. Horgan "to attend the entire of the time the action was pending," and that if he did so, it was at the instance of Mr. Flynn. From the telegram to Dr. Ellis, he inferred that Dr. Horgan's attendance was expected. In the absence of contract, he left it to the jury to assess a fair remuneration to the Medical man, stating that the sum claimed had been paid in similar cases. As to the question of skilled testimony, no evidence had been offered. He submitted three questions to the jury:—

"Did the defendant, Flynn, make a contract with Dr. Horgan? If he did not make such a contract, what in your opinion would be a fair sum to pay the plaintiff for his loss of time and attendance? And, thirdly, was Dr. Horgan employed as a skilled witness?"

After an absence of about an hour, the foreman handed in the verdict to his Worship, who announced that the jury gave no finding upon the question whether the plaintiff attended in Dublin to give evidence as to matter of fact or as a skilled witness; and in this he could not say they were wrong, for the evidence was insufficient. On the first question they found that there was no contract; and on the second they gave as a fair amount of remuneration, a verdict for £10, inclusive of the amount lodged in court, and that accompanying the subpœnas.

The amount found by the jury is undeniably rather scanty, but the verdict appears on the whole reasonable. It offers another example of the necessity in all legal cases for obtaining a definite written agreement beforehand.

Although the medical man, like every other member of the community, is bound to give witness in courts of law, it by no means follows that he is to be dragged into every dispute, and after sacrificing valuable time, as well as the health and comfort of his patients, is to be put off with a remuneration scantily meted out in shillings and sixpences—and even this accompanied by the indignity of parading his just claims before such an unsympathising audience as an ordinary British jury.

PARLIAMENTARY.

On Friday, July 9, in answer to a question put by Sir J. Jervoise, in reference to the Government vote for experiments on vaccination in sheep, and for checking the spread of ovine small-pox in Ireland,

Sir R. Peel said that the disease having broken out in England, in order to prevent its introduction into Ireland, the Irish Government stationed one inspector at Dublin, another at Dundalk, and a third in another town, to examine sheep arriving in that country. They were paid so much a day, amounting altogether to about £200. They rendered a great public service by preventing the introduction of the disease at Ballinasloe, where more than 100,000 sheep were collected. The vaccination of sheep was not tried in Ireland, and was confined to this country.

The annual debate on the British Museum estimates came off on the same evening. Mr. Walpole said that the estimate for the present year was £8471 less than the expenditure of the year 1862-63. Of this diminution, £4000 was likely to be permanent. A considerable saving had been effected since the repairs and superintendence of the Museum had been placed under the control of the trustees. Many valuable additions had been made to the different departments. Amongst them he especially referred to the Solenhofen collection of fossils purchased from Dr. Häberlein, of Pappenheim, including, as our readers will recollect, the unique specimen of Archæopteryx. The limitation of admissions to the reading-room to persons over twenty-one years of age, except under special circumstances—a result of the previous indiscriminate issue of tickets—and the election of Mr. Disraeli as a trustee, were the other events noticed in the official statement. The motion of Mr. Ayrton, "that it is the duty of the trustees of the British Museum to afford the public greater facilities for visiting the collections of the Museum," gave rise to a short debate, in which the questions of opening the Museum in the evening and on Sundays were discussed. Of course, the insurmountable difficulty in the way of lighting up the Museum at night is the impossibility of insuring the collection against fire. Not to speak of the injury done by gas to animal and vegetable substances and to books, the simple truth is, that the collections of the Museum being irreplaceable cannot be valued by money, and therefore cannot be insured. Until a method of lighting be invented which shall render the accident of fire an impossibility, Government would not be justified in exposing priceless national treasures to such a risk. Mr. Ayrton's motion was withdrawn.

The subject of railway accidents was introduced by Mr. Bentinck, who, believing high rates of speed to be their chief cause, considered it the duty of Government to legislate against them by restricting the rate of travelling. This view of the question was not shared by other speakers. Mr. R. Hodgson and Mr. H. Lewis both referred the majority of railway accidents to want of punctuality.

Mr. M. Gibson said speed was a relative term; what was a safe rate of speed on one railway would be unsafe on another. The question depended upon curves, gradients, and other conditions. There must be a sliding scale of speed, and what was a high rate of speed to-day might be on the same railway not so to-morrow; so that constant interference would be necessary, which he did not think would be attended with public advantage. He preferred leaving the matter as it was now; the railway companies were responsible for neglect; year by year accidents were decreasing, and the number of persons killed and injured becoming fewer, and he should not be justified in imposing restrictions upon directors as to the rate of speed upon railways.

Mr. Bentinck's motion was ultimately withdrawn.

On Monday, Mr. Scourfield obtained leave to bring in a Bill to amend the Lunacy Acts, in relation to the building of asylums for pauper lunatics.

"On Tuesday, Mr. Coningham asked the Secretary for India whether it was the intention of Her Majesty's Government to act upon the recommendations of the Commissioners appointed to inquire into the sanitary condition of the army in India, and at once to introduce remedial measures for the prevention of diseases in hot or unhealthy climates, so as promptly to check the mortality by which, 'besides deaths from natural causes, sixty head per thousand of our troops annually perish in India.'

"Sir C. Wood, who was very imperfectly heard, said that the attention of the Government of India had for some time been directed to the subject, and several improvements had been effected in the sanitary condition of the army. The report of the Commission, however, had brought to light a rate of mortality which, before its publication, no one believed to exist. The attention of the Indian Government should be directed to the report, and he had no doubt that measures would be taken to carry the recommendations of the Commission as far as possible into effect."

We hope before long to furnish our readers with a review of the Blue Book containing the report of the Commision, but we confess that we are not sanguine as to a rapid and complete sanitary reform in India. We do not like Sir Charles Wood's "as far as possible." No doubt something will be done,—certain of the Commissioners' recommendations will be carried into effect at the principal stations,—and so far good will result. But sanitary reforms are not easily carried out even in England; witness the difference of death-rate between different districts of our large towns. The task will be a thousand-fold harder in India, where the fatalism and impassiveness of the Oriental, the natural dislike of a conquered race to interference on the part of the conquerors, the enervating effects of climate on both native and European, and the vastness of the area to be treated, are all superadded difficulties which it is not easy to over-estimate. Besides them, we must allow a margin of failure for the blunders and shortcomings of our own Government officials. Still, Parliament and the country have now grown alive to the evil. The Commission has done its work well. It has pointed out the causes of the appalling mortality in our Indian army, and how far and in what way this worse than useless sacrifice may be reduced. It has proved clearly that something must be done, and has indicated what appears possible.

MURDERS BY THE INSANE.

Two criminals, accused of murder, have been, during the past week, acquitted at the Central Criminal Court on the ground of insanity. One, an elderly man, named Thomas Lidbetter, killed his wife and his imbecile son by cutting their throats. When taken, Lidbetter offered no resistance. On being formally charged, he said he "knew all about it," but that he did not know what he was doing at the time. Evidence was given that he had latterly become taciturn, eccentric, and irritable. Mr. Evan B. Jones, Surgeon, of Hanover-street, Hanover-square, said that he had known the accused for some years, that he had attended his wife when she gave birth to the imbecile child. The prisoner's conduct was most considerate and affectionate at that period; but he was always a strange, odd man, peculiar in his manner, taciturn, and incommunicative. Originally he appeared to have been feeble-minded, and, after injuries to the head, received in 1856 and 1859, his perceptive faculties became less acute, and his eccentricities more strange. Mr. Gibson, Surgeon to Newgate, on the contrary, deposed that the prisoner had been under his care for a week, and in his opinion was now in a sound state of mind.

Lord Chief Baron Pollock very naturally expressed his surprise that no Medical man had been called on the part of the prosecution to speak to the prisoner's state of mind at the time of the alleged murder, and on Mr. Metcalfe, the prosecuting barrister, proceeding to cross-examine Mr. Gibson as to the effects of intoxication on an enfeebled intellect, his Lordship interrupted the examination by saying, that "An inquiry involving the life or death of the prisoner was not to be made the sport of a cross-examination as if it were an every-day matter."

We are heartily glad that our judges are becoming more alive to the extreme danger of eliciting Medical opinions on such difficult matters as criminal insanity by the process of cross-examination, a method which not only in the large majority of cases fails to extract the real opinion of a scientific witness, but in no small proportion leads him on to expressions or statements which to by-standers bear an entirely different meaning from that he intends. This result may be a triumph of forensic skill, but it is fatal to justice no less than to scientific truth.

The other case was one in which the insanity seems to have been dependent on pregnancy. The prisoner was a married woman, 21 years of age, and four months advanced in pregnancy. She had been twice *enciente* before, and during those periods had suffered from great despondency, and had always exhibited a peculiar horror of knives and razors. She murdered her child by cutting its throat, and then attempted her own life, first by wounding her throat, and then by throwing herself out of window. She also took laudanum, which was detected in some fluid she vomited. This at least appears to have been an instance where the catastrophe might have been foreseen and prevented. Yet, probably, any Physician who in her previous pregnancies had recommended restraint would have had some difficulty in proving to a jury its necessity, if proceedings had been taken against him for wrongly signing the certificate of lunacy.

THE FISHGUARD MURDER.

SEVERAL points of interest were raised in course of the trial of the woman Lydia Williams. One was, whether a dying declaration made in Welsh, and translated by an interpreter who was not sworn, could be received as evidence. The judge ruled in the affirmative. Another was the reception of a portion of the dying declaration describing acts of ill-usage on the part of the prisoner other than the administration of poison, which alone formed the ground of the indictment. The judge ruled that such portion of the declaration could not be admitted. A question also arose, whether Professor Herapath, who is not in the Medical Profession, could be allowed to give evidence as to post-mortem appearances. The judge decided that as Mr. Herapath was a lecturer, accredited by the Medical examining bodies, he might give such evidence.

In reviewing the case, we think that Mr. Wathen's evidence expressed all that was warranted by the facts. In cross-examination he said:—

> "I don't know that I gave my opinion as to the cause of death quite independent of all that I have heard. I have heard that poison was administered. I mean I have heard it here to-day. If I, a perfect stranger, was called in in the county of Northumberland, I should have said that there was the very greatest suspicion of an irritant poison. It might have been caused by other causes, but I never saw anything like it."

It also does not appear, as is stated by a Medical contemporary, that Mr. J. D. Brown ascribed the death to heart affection. He said:—

> "I have heard the evidence of Mr. Wathen, and agree with it every word. From what I heard him say he saw during life-time, and from what I saw in the post-mortem examination, I should say the nervous system was exhausted. I believe that the amount of disease of the stomach and intestines would have caused that nervous exhaustion by starving him. I can't say what caused those symptoms.
>
> "Cross-examined: Assuming that the man died from natural inflammation, I may say I have not much experience of inflammation from irritant poisons, and therefore I can't say that there was any difference in these appearances and what they would have been if the deceased had died from natural causes.
>
> "By the Judge: I don't think the inflammation alone was sufficient to cause death in itself. I think that the inflammation prevented the food from doing its duty, and that the deceased died from exhaustion. I have seen three cases of numbness such as was referred to by Dr. Wathen, and in each case it was produced by the persons taking large quantities of arsenic.
>
> "Cross-examined: Numbness oftentimes arises from pressure on any nerve endued with feeling.
>
> "On being recalled at the request of the prisoner's counsel, Mr. Brown said that vomiting frequently follows after taking food, provided there is a disease of the stomach. Inflammation of the stomach would not arise from debility. Disease of the heart frequently passes into and becomes inflammation of the stomach in many cases, but then the disease of the heart would be a leading symptom, and in this case there were no appearances of the heart to account for this stomach disease."

The fact is that the long time which elapsed before death, the non-discovery of arsenic in the urine which was examined from May 1, *i.e.*, twenty-nine days before death took place, and the non-detection of arsenic in the tissues, despite the appearances of inflammation in the alimentary canal, rendered the case exceedingly difficult, and, we think, justified the jury in the verdict they returned.

FROM ABROAD—CAUTERISING BY GAS—A CONSULTATION-AGENCY—PRECAUTIONS AGAINST VACCINO-SYPHILIS—THE PROCESS OF PUTREFACTION—THE PROSCRIPTION OF CALOMEL IN THE UNITED STATES ARMY.

M. NÉLATON has been recently employing a neat and effective substitute for that relic of the Surgery of the Dark Ages, the actual cautery. Having observed in the case of burns that the portions of the body with which flame comes into actual contact suffer much greater destruction than is effected by mere white heat without flame, M. Nélaton conceived the idea of replacing the cumbrous apparatus required for the actual cautery by a jet of gas. A simple apparatus contrived by Nachet, projects upon any desired point a fierce white flame capable of melting glass or silver, and which consequently effects the destruction of the doomed structure far more efficiently than the actual cautery, while by the exactitude with which the length of the flame can be regulated, such destruction may be kept within precise limits, and neighbouring parts preserved from injury. The procedure is far more simple and rapidly effected than is cauterisation by means of the electric pile. In a case of fungous tumour of the palate, the application of the flame was continued during a minute (the pain being very supportable) over a surface equal in extent to two-thirds of a crown-piece. An exactly limited carbonised eschar fell off at the end of forty-eight hours, showing that it must have been very superficial.

The following advertisement appeared in a recent number of the Vienna *Med. Wochenschrift*, signed by Dr. Tugendhat, Assistant-Physician at the Vienna General Hospital, and one of the Medical faculty of that city: –

"Important to Doctors and Patients.—Patients who resort to Vienna for the purpose of consulting the Medical authorities, are surrounded with so many difficulties that it is rare for them to be able to attain a suitable consultation. This frequent inconvenience has led to my forming the idea of founding a 'consultation establishment.' The object of this will be—1. To assist the patient to make as quickly as possible choice of an adviser, especially suited to the requirements of his case. 2. To arrange and manage the consultation. 3. To make an exact and scientific report to the patient's ordinary attendant of the results of such consultations; and, 4. To provide consultations by letter. Most of the Clinical Professors to whom I have made known the particulars of my scheme, declare it to be an eminently suitable one, and I hope therefore to receive the patronage of the Practitioners and the public of the various provinces.

The worthy doctor does not state the sum which he is to charge; but whatever this may be there can be no doubt that a more unprofessional document was never issued. Why, the poor anonymous Physician-author of "Who to Consult" sinks into insignificance when compared with his Teutonic brother-touter.

M. Diday, of Lyons, a believer in the transmission of syphilis by vaccination, enumerates the various precautions to be taken to prevent so disastrous an occurrence. The vacciniferous infant should be most carefully examined for signs of congenital syphilis, availing ourselves of the results of the researches of Hutchinson upon this matter; and when any of these are suspected to be present, however fine the vaccine pustule may be, the child must be rejected. This seems practicable enough; but when M. Diday further instructs us to pass in review the nurse, parents, relatives, and neighbours with whom the child may have come into contact, examining their mucous membranes, the palms of their hands, the hairy scalp, and the occipital and the mastoidean glands, he recommends a ridiculous impossibility, the parents of vaccinated children being indeed generally only too glad to escape the duty of furnishing lymph, and not very likely to submit to so inquisitorial a procedure. When the vacciniferous infant is not the subject of hereditary syphilis, it still may become the source of syphilis itself by having been inoculated with vaccine virus contaminated with that poison. In that case, there is usually something abnormal in the vaccine pustule which results; and whenever the period of suppuration is too prolonged, or any other irregularity is observed, vaccination should never be performed from it. Another recommendation of M. Diday's may seem at first sight uncalled for, viz., that before vaccinating a child a most careful examination should be made in order to ascertain that it is not the subject of syphilis. And this for two reasons:—First, because such a child would become a new source or centre for the spread of vaccino-syphilitic infection; and secondly, because the vaccination may give rise to the appearance of syphilitic symptoms, which would otherwise only have appeared later, and would have been more curable. At all events, such a child should not be vaccinated until after three months of age; for M. Diday's statistics prove that of 158 cases, the symptoms of hereditary syphilis were manifested in 146 children prior to the age of three months, and in only 12 after this age. By waiting until after three months a much better guarantee will therefore have been obtained. Even a syphilitic infant must not be deprived of the benefit of vaccination; but in order to prevent the propagation of disease by means of lymph taken from its arm, the pustules should be destroyed by cauterisation on the fifth day.

M. Pasteur has just laid before the Academy of Sciences some novel views concerning the process of putrefaction. This is determined by organised ferments of the genus *vibrio*, of which Ehrenberg describes six species, and all of which cannot only live without free oxygen gas, but even perish from contact with it, unless protected from its direct action. Usually after twenty-four hours an intestine movement may be observed within the putrescible liquid, that is accompanied by an entire abstraction of the oxygen of the air, which may be held in solution, and its replacement by carbonic acid gas. This is due to the development of the minutest infusoria, the *monas crepusculum*, and the *bacterium termo;* and after the task is accomplished these perish and sink as a precipitate. If by chance the liquid contain no fecundated germs of ferments it would remain without undergoing farther change. Ordinarily, however, when the oxygen has thus disappeared, the *vibriones* appear, and putrefaction commences, and proceeds consentaneously with their development. If any oxygen dissolved in the putrescible fluid were not previously abstracted by special agents, no putrefaction could take place, as it would destroy the *vibriones*, which are the immediate agents of this process. But putrefaction goes on when the fluid is exposed to the contact of the air, and the oxygen obtained from this and dissolved in the putrescible fluid should act destructively on the *vibriones*. This solution is prevented by the formation on the surface of the liquid of a pellicle consisting of the bacterions, mucor, mucedine, etc., and the development of the *vibriones* goes on. The putrescible fluid thus becomes the seat of two very distinct kinds of chemical action, which bear relation to the physiological functions of two descriptions of animated beings obtaining their nourishment therein. The *vibriones*, on the one hand, living without the co-operation of the oxygen of the air, determine within the liquid the act of fermentation, *i.e.*, the transformation of azotized matters into more simple but still complex bodies; while, on the other, the *bacterions* (or mucors) reduce these products to the state of simple binary combinations, water, ammonia, and carbonic acid. M. Pasteur proposes for these two classes of animated existence the terms *aerobies* (beings unable to live independently of free oxygen gas), and *anærobies* (beings capable of indefinite multiplication independently of oxygen gas). The *anærobies* may also be termed *zymics*, or ferments.

The order issued by the Surgeon-General of the United States Army, prohibiting the use of calomel and tartar emetic, to which we adverted a few weeks since, has, as might be expected, caused great excitement in the Professional circles in America. The herbalist quacks of course are jubilant indeed, regarding this as the first step of the recognition of their principles; but amongst legitimate Practitioners great difference of opinion prevails as to the expediency of the proceeding. A very warm debate upon the subject took place in the American Medical Associations, which, after suspending their sittings during the war, has attempted their resumption at Chicago. Resolutions condemnatory of the order were carried; but the promoters of these seem little acquainted with the exigencies of the case, and treated the decree as a mere abstract condemnation of the remedies in question. Those who are really acquainted with the present condition of the United States Army Medical Service, agree that the Surgeon-General had really no option. Examples of the most fearful abuse of these powerful drugs by incompetent persons were daily reported to him, and the means of efficient supervision and inspection he does not possess. To say that ignorant Surgeons should be replaced, is to talk idly, when no sufficient substitutes are offering themselves as candidates. The Medical history of this war, if ever truly written, which it probably never will be, must indeed unfold a fearful tale.

REVIEWS.

Outlines of Surgery: being an Epitome of the Lectures on Principles and Practice of Surgery delivered at St. Thomas's Hospital. By F. Le Gros Clark, Surgeon to the Hospital, etc. London: John Churchill and Sons.

It is a judicious practice of some lecturers to print an abstract of subjects treated more fully by oral delivery. Such a compilation answers the double purpose of a text-book for the learner, enabling him to arrange and classify topics, of which memory is a vague and ephemeral guardian, and also of a ready reference to the Practitioner, who, amid the emergencies of an active career, may thus refresh his recollections with speed and conciseness. Mr. Le Gros Clark's Outlines of Surgery is a work calculated to answer both these purposes. It has the additional merit of containing, in an unpretending form, the results of much experience, as well as views founded on careful and impartial observation.

In seven chapters, extending over about 250 pages, all the main departments of the art are briefly, but clearly, recapitulated. The first section is devoted to general and constitutional phenomena, passing rapidly over the doctrinal and somewhat scholastic materials which still linger in this branch of research. Wounds, hæmorrhage, and injuries by heat and cold follow next, to be succeeded by the group of special diseases including scrofula, syphilis, tumours, and cancer. Under the fourth heading we find abnormities, disorders of various tissues, fractures, dislocations, and injuries of the brain, vascular system, spinal cord, and the like. Much greater development has been given to these more practical points; in especial, the notes on fractures and other mechanical injuries seem precise and satisfactory.

A fifth division treats of regions; the face, organs of sense, viscera, and genito-urinary system. In the sixth is a resumé of operative Surgery; in the seventh and last, a highly practical collection of "suggestions in emergencies and doubtful cases." This of itself would go far to remove the work from the similitude of a mere lecturer's index or prospectus. But it has evidently been the aim of the writer throughout, while touching lightly on matters theoretical or replete with necessary detail, to insist more at length on principles and on facts of immediate personal experience.

The spirit of the book is moreover healthy, and nowhere that of a partisan. Vexed questions, such as syphilis, meet with judicial impartiality; and operations not universally accepted obtain no hasty sanction. The remarks, for instance, on excision of carious bone by gouging are to the point. It would, perhaps, be well if these feats of carpentering skill were less matters of emulation among Surgical handicraftsmen; for while they possibly do credit to the operator's manipulation, they undoubtedly "often create new mischief by violence to surrounding parts."

We congratulate Mr. Le Gros Clark on having added another worthy member to the useful family of manuals. Portable treatises on Surgery have before now proved both valuable and successful; but the field of inquiry, like some Alpine district, is large, intricate, and beyond the reach of an unaided glance. It is matter for sincere satisfaction if many competent guides are at hand. There is room and need for all; each may, indeed, show a path differing in some regions from that of his forerunners, but all alike lead to a safe, desirable, and successful termination.

Seventeenth Report of the Commissioners in Lunacy, etc. (Ordered to be printed June 9, 1863.)
Fifteenth Annual Report of the Somerset County Pauper Lunatic Asylum, for 1862.
Annual Report of County of Warwick Pauper Lunatic Asylum, for 1862.
Report of the Lunatic Asylum for the North and East Riding of Yorkshire. 1863.
On the Practical Use of Mental Science. By J. Stevenson Bushnan, M.D., etc. 1862.

The publication of the Commissioners extends to a length of 176 pages. The main bulk of this is occupied with statistical and economical tables and copies of correspondence. The report itself forms about a quarter of the volume, and begins with notices of new Asylums, including the Criminal Lunatic Asylum shortly to be opened at Broadmoor under Dr. Mayer's superintendence. The Commissioners notice the want of Hospital provision for insane soldiers, and mention the general desire to remove asylums badly situated to better sites. "As respects the two metropolitan Hospitals," they say "we are glad to find that there is now a fair prospect of effecting a removal of Bethlehem to a better site! We regard this proposition with the utmost satisfaction, being firmly convinced that, if well carried out, inestimable benefit will accrue to the occupants of the new building."

They strongly advise a similar removal of St. Luke's Hospital, "the worst situated, and externally the gloomiest Lunatic Hospital in the United Kingdom."

Some interesting facts follow respecting the Earlswood Idiot Institution, showing that twelve patients during the year had improved so much as to be able to get regular employment.

The practice of allowing patients to visit their friends is commended; and an account of the proceedings in the case of Hall *v.* Semple occupies several pages. With some details as to cases fatal from violence and injuries, and a recommendation to increase the employments and amusements of inmates by the use of "glasses, clocks, and a variety of articles of domestic furniture," the report concludes.

The three local reports mainly deal with figures and domestic arrangements. Each, however, contains a brief Medical statement by the resident officer. Dr. Parsey, of the Warwick Asylum, sends an interesting document and some good remarks on a case of simulated insanity in a notorious criminal who succeeded in escaping. He notices the relief that the new criminal asylums will be to others, as "a man of this character, though looked after with more than ordinary care, would not have great difficulty in freeing himself from any modern lunatic asylum." He also records a curious case of suffocation by the bed pillows in a female while sleeping heavily after an exhausting maniacal paroxysm.

Dr. Hill, of the Yorkshire Asylum, gives facts as to carbuncle, gangrene, general palsy, erysipelas, and a peculiar type of fever not uncommon in the insane.

Dr. Robert Boyd, of the Somerset Institution, contributes an elaborate statistical paper, in which he recognises "moral insanity," of which eighteen cases are tabulated, including among them "dipsomania."

Dr. Bushnan's essay, reprinted from the *Journal of Mental Science*, is rather metaphysical than therapeutic, speaking of the close connexion between the mind and the physical organisation of the nervous system.

PROGRESS OF MEDICAL SCIENCE.

Selections from Foreign Journals.

ON THE DANGER OF TEMPORISING TOO LONG WITH ENCYSTED TUMOURS.

By M. FLEURY.

M. Fleury, Surgeon of the Hotel Dieu at Clermont, in this paper observes that these tumours are generally regarded as slight affections, and, as they frequently for years long occasion little inconvenience, patients feel indisposed to undergo the pain of their removal. Many Practitioners also advise expectation, while others still have faith in topical applications or absorbent medicines. If the progress of such tumours were always gradual and progressive, expectation might indeed be advised until a given moment, but, unfortunately, this is not always the case. Thus a tumour which has remained stationary for years will sometimes in a few weeks, or even a few days, double or triple its size; while in another case it may undergo a degeneration leading to a general infection of the economy. Such conversions into cancerous tissue are, however, rare, and the author has only met with one example, and in this case the patient died before there was time for the general system to become affected. In some cases, the changes which the internal membrane of the cyst may undergo have been confounded with cancerous alteration. In some tumours the membrane will remain as thin as paper, while in others it acquires enormous thickness. Some of the tumours dilate at the same time that their walls augment in density; and such are the most dangerous for treatment, as large surfaces have to be exposed, leading to severe inflammation, not unfrequently ending in gangrene. Sometimes, after acquiring a large size, the tumour spontaneously bursts, and secondary cysts form around the aperture which has given issue to the liquid contents.

The wisest course is not to wait too long, and to caution patients as to the possible consequences of too long temporization. The accidents are of two kinds. The modifications which the membrane of the cyst may undergo have their perils; but those accruing from the great increase of its cavity are still greater. The larger tumours are not always those which are most prone to undergo these transformations. Patients not infrequently present themselves with cysts situated on the knee, which, after existing for years without attaining a large size, burst externally without obvious cause, and project a soft, reddish mass, offering some analogy to softened encephaloid, and soon furnishing an enfeebling arterial hæmorrhage. On cutting into such a tumour, a fleshy membrane is found, formed by a velvety, fungoid tissue, whence the slightest pressure causes an abundant escape of blood. Touching this membrane with charpie imbibed in perchloride of iron, or its removal with the bistoury, induces the cessation of this bloody oozing. Its non-malignant nature is proved by the fact that there is no tendency to reproduction. Cysts are sometimes met with, distended with fibrinous coagula, presenting great analogy with those found in aneurisms; and arterial blood escapes with great facility after operations upon cystic goîtres. This blood is due to the presence of a spongy tissue, which is not found exclusively in cystic goître, but also in cystic tumours of other tissues of a less vascular structure.

Not only is there danger produced by delay in the case of cystic tumours from the production of this vascular texture, but also from the supervention of severe inflammation after operation, having a great tendency to terminate in gangrene or give rise to purulent infection. The author has operated many times in these cases, and the mode which he has found most successful has been to divide the tumour along its mesian line, not meddling with the membrane of the cyst if very thin, but excising it when much thickened. He then induces inflammation by filling the cavity which contained the fluid with dry charpie. At the end of four or five days the innermost layers have become dead and exfoliate, leaving behind a granulated membrane, which forms the point of departure in the formation of a healthy cicatrix. The edges of the wound are then brought together by strapping. Under any mode of operation, however, a fatal issue in advanced cases is not rare; and M. Fleury concludes his paper by again pointing out the necessity of removing these tumours at an earlier period of their appearance.—*Gazette Médicale*, Nos. 16 and 17.

EXCERPTA MINORA.

Perchloride of Iron in Zona.—Dr. Gressy relates some cases confirmatory of the value of this application. He considers that a concentrated alcoholic solution of the perchloride should be applied at any period of the evolution of the zona. It should be applied only once a day, repeating the application one, two, or three days in succession, according to circumstances. The vesicles should not be opened, in order to save the patient useless pain.—*Bull. de Thérap.*, vol. lxiii., p. 406.

Oil of Turpentine in Proropalgia.—Dr. Pfaff states that in some severe cases of this affection, after in vain trying the various reputed and powerful remedies which have been recommended, he has found remarkable benefit to result from the external and internal use of the oil of turpentine. He gives from five to ten drops in a little yelk of egg three times a-day, diminishing the dose when some improvement has been obtained.—*Varges Zeitschrift*, vol. i., New Series, p. 200.

Remarkable Anomaly of the Cavities of the Heart in an Adult, without Cyanosis.—M. Bouilland laid before the Academy of Medicine the heart of a man, 39 years of age, who had died from a cerebral affection. The two ventricles formed but one, the intraventricular wall being absent. The pulmonary artery was contracted, and there was no trace of valves. The auriculo-ventricular orifices were normal, but the aorta had but two valves. This artery did not cross the pulmonary artery, but was placed in front and to the left of it. There was observed during life irregularity in the cardiac pulsations, and the stethoscopic signs were those of hypertrophy. A very strong *bruit de souffle* was heard, and an intense vibrating *frémissement* was easily perceived. There was no cyanosis.

The New Diuretic Wine of the Hotel Dieu.—M. Trousseau, not satisfied with the existing diuretic wines, has taken considerable pains to frame a formula of one which furnishes good results. White wine, 750 parts, juniper berries, 50, digitalis leaves, 10, and squill, 5 parts. Macerate during four days, and add acetate of potash, 15 parts. Filter. Dose,—two or three tablespoonfuls per diem.—*Bulletin de Thérapeutique*, vol. lxiii., p. 311.

Progress of Phthisis as it affects the Right or Left Lung.—M. Cocheteux, of the Valenciennes Hospital, has long had his attention directed to this point, and he has invariably found that phthisis is more rapidly fatal when it affects the right lung than when the left lung is in question. Before examining particularly into this point, he had been frequently struck with the delay with which a fatal termination took place in subjects apparently far advanced, while others offering a far better appearance died rapidly. He at first thought the diagnosis might be at fault, but having since taken great pains with this, and obtained its verification at the hands of others, he is now certain that the prognosis to be delivered must essentially depend upon the side which is affected. Patients with cavities in the left lung may live for years, while others, with scarcely the signs of incipient phthisis in the right lung, die rapidly.—*Gazette des Hôp.*, No. 68.

Local Employment of Bismuth by Means of Glycerine.—The sedative action of bismuth renders glycerine a very suitable associate. ℞ Subnitrate of bismuth 1 to 3 parts, glycerine 3 parts. The bismuth in a state of impalpable powder is to be gradually incorporated by the glycerine. The mixture must be stirred up every time it is employed. When it is applied to the surface a pencil should be employed; but when it has to be introduced within any of the natural cavities, as the vagina or rectum, the finger or plugs of charpie should be used. M. Follin employs this mixture in equal parts at the Salpêtrière in certain diseases of the eye, as chronic granular conjunctivitis, ciliary and glandular blepharitis, etc. M. Debout has found the same preparation of use in eczema of the axillary, vulvar, or anal regions, as well as in chaps of the nipples, lips, and hands. M. Trousseau employs the same mixture, but with only one part of bismuth, in fissures of the anus, when these resist rhatany injections.—*Bull. de Thérap.*, vol. lxiii., p. 508.

On the Administration of Colchicum in Gout.—M. Maistre, after stating the views of Garrod and others upon the employment of the salts of lithia in the gouty diathesis, comments upon the efficacy with which colchicum relieves the suffering of the paroxysm, and at the same time the uncertainty which arises in its administration, owing to the variety in its mode of preparation for use. To obviate this inconvenience, he gives it in the form of what he calls "American gout pills," in the composition of which enter the carbonate of lithia, powder of the root of belladonna, sulphate of quinine, and the *tannate of colchicine*. These pills are always identical in composition, their active principles being definite chemical compounds. Covered with sugar, they may be kept for any time. From one to five per diem may be required to produce the purgative effect, and this is unaccompanied by the colics and irritation of the large intestine which are so often observed during the operation of tincture or extract of colchicum. The author does not give the proportion of these substances in the pills.—*Gaz. des Hôp.*, No. 43.

Hypodermic Injections of Sulphate of Morphia.—Dr. Levick related an interesting case to the Philadelphia College of Physicians, in which a solution of the sulphate of morphia was employed for a very long period (daily for five months, twice a day for three months, and thrice for six weeks) with great relief to the patient and no unpleasant sequelæ. A gentleman, who three years before suffered from myelitis, became the subject of severe sciatica, which induced dreadful suffering, and yielded to none of the usual remedies. Fifteen minims of a solution of the sulphate of morphia (gr. xvj. ad ℥j.) were subcutaneously injected into the thigh with prompt though temporary relief, the same results ensuing on its nightly repetition, the quantity injected being increased gradually to twenty-eight minims. After the repetitions noticed above, the patient was enabled to discontinue the morphia, and resume his affairs with comfort. The case is not related as an example of a radical cure, but as showing the rapid alleviation thus obtained, after the failure of other means, enabling the patient to pursue hygienic measures which, at all events, temporarily re-established his health.—*American Quarterly Journal*, p. 90.

Fatty Bodies in Poisoning by Strychnia.—Dr. Riendherhoff states the following results of numerous experiments:—1. The absorption of strychnia and its salts is delayed by the prompt administration of lard, butter, or oil, the lard being most, and the oil least, effective. The time thus obtained permits of the appropriate treatment of the case being conducted. 2. The course of the symptoms, after the first convulsions, is shortened, rather than prolonged, by the use of butter or oil, and lard should be preferred. 3. The presence of fats in the stomach delays the action of emetics, so that these have to be given in relatively larger or oftener-repeated doses. The stomach-pump should therefore be employed in preference when fat has been administered, oil being used as the fluid for injection. —*Donder's Archiv.*, 1862, No. 3.

PROVINCIAL CORRESPONDENCE.

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SCOTLAND.

Edinburgh, July.

On Monday last we had a great indignation meeting, anent the Vaccination Bill of the Lord Advocate. The town Practitioners mustered pretty strong, and there was a good sprinkling of "young men from the country," who came into the Hall in a jaunty manner, singing, "You won't come over me;" meaning, I presume, that his Lordship and Sir William Dunbar were not to have it all their own way. Loud were the calls for the Medical men who had told the Lord Advocate that half-a-crown was too high a fee for vaccinating, and that eighteen pence was ample remuneration for the performance of that operation. I need hardly say that the one-and-sixpenny Professional did not respond to the call, knowing well the numbers who would be pitted against him. In the course of the meeting, the parochial boards were pretty freely discussed, and I would recommend those bodies to increase the salaries of their Medical officers if they have any regard for themselves. One of the speakers informed us that he came from Glendevon, where there were three children born on an average every year. Whether he monopolised the practice there or not, he did not say, but probably such a good thing is not allowed to go a-begging. From inquiries that I have been making, I hear that only three students are going from this school as candidates for the Army Medical Department in August; the public abuse of the Assistant-Surgeon at Aldershot the other day by the general officer has given some of them a fright. The poor Assistant-Surgeon probably thought that he was doing quite the correct thing in marching in the rear of his regiment; but excepting there is a general salute, when the Medical officers stand on the right of the line, there is really no determined place for the Medical staff. The Assistant-Surgeon should have placed himself at the rear of the saluting flag, as is generally done, but the offence was probably the result of over zeal, and did not demand such public correction. Pages have been written about the various grievances of military Medical officers, but the writers have quite overlooked, in my estimation, the principal one, viz., "the Medical inspections" held every Saturday, when the Assistant-Surgeon has to inspect the men's legs and arms to see if they are clean; surely that duty might be performed by the sergeants of companies. There have been two accidents recently, the result of cleaning windows from the outside. One man fell from five stories high, and the other three; both were taken to the Royal Infirmary, and on the one Mr. Spence performed excision of the elbow-joint, in preference to amputation of the arm, the case being in every way suitable for the operation, but the patient has since died from other causes. The other patient was taken to Mr. Syme's wards suffering from severe injuries of one of his legs. Dr. P. H. Watson (in Mr. Syme's absence) had to perform amputation at the thigh. Although so many men receive injuries annually from the careless manner in which they stand outside the windows of our lofty houses, still painters, glaziers, *et hoc genus omne*, will not take warning, but recklessly attempt, as if they were flies, to stick with the palms of their hands to perpendicular walls. Dr. P. H. Watson in the Royal Infirmary to-day performed excision of the elbow-joint on account of an injury received two years since, and the joint being anchylosed at an unfavourable angle was comparatively useless. The incision was not the ordinary H, but the linear, thus simplifying the operation, a large curved grooved director being inserted under the humerus, and so removing the soft parts out of the way of the saw. Dr. Warburton Begbie has in one of his wards a most interesting case of a young woman who has been suffering from diphtheria and bronchitis. During her sojourn under Dr. Begbie she has several times expectorated bronchial polypi, but there was one in particular a beautiful specimen of a cast of the ultimate ramifications of the small air-tubes. The patient has quite recovered from the diphtheria, and is otherwise gradually improving. Dr. Saunders, our talented lecturer on physiology, has in his wards in the Royal Infirmary two most interesting cases of hysterical epilepsy and chorea. The former a young girl, who eighteen months ago was frightened by a ferocious bull, since which time she has suffered attacks of epileptic convulsions. At present they are very frequent, and last from ten to twenty minutes, terminating in a flood of tears. During some of the attacks there is complete opisthotonos and violent eructations.

The other case is that of a young woman, who about last Christmas was much alarmed at seeing some soldiers enter her mother's house for the purpose of capturing her brother, who was a deserter from the army. Her menstruation has been irregular, but latterly is much improved. There is considerable twitching of the eyelids, and the left side is paralytic.

Professor Lizars has resigned the Chair of Anatomy at Aberdeen, his health I understand not being quite so good as his friends would wish. The candidates for the vacancy are Dr. Struthers, our Anatomical Lecturer here, and Dr. Redfern, of Belfast. We fancy that Dr. S. will be the successful man, and if so, there will be a favourable opening for a good Anatomist in the College of Surgeons. Dr. Warburton Begbie read us a paper at the Medico-Chirurgical Society the other evening, on "Exophthalmic Bronchocele." The paper was so good, and the discussion in proportion, that we had no time for Dr. Keith's report of his cases of Ovariotomy, which was also on the billet, but was postponed for a fortnight.

GENERAL CORRESPONDENCE.

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PRACTICAL BENEFICENCE—SANITARIUM FOR MIDDLE-CLASS INVALIDS.

Letter from Mr. Lewis C. Hertslet.

[To the Editor of the Medical Times and Gazette.]

Sir,—Some friends of mine are disposed to take a large house and grounds situate on a heath in Surrey, and to fit it up plainly for the reception of invalids of small means. They would give good wholesome food and roomy lodging for 10s. 6d. to 12s. 6d. a week. They believe at this rate it would be nearly, if not quite self-supporting.

If your Medical readers think such an establishment would be a boon to the middle-classes, perhaps some of them will take the trouble to drop me a line to say so.

I am &c. Lewis C. Hertslet.

Fitzroy-park, Highgate, N., July 10.

Would it be desirable to have a better table at five or six o'clock at, say, 5s. per week extra?

[Such an institution as Mr. Hertslet proposes, appears to us to deserve the warmest encouragement. There are plenty of persons in middle-class life who require change of air after illness, and who cannot, for various reasons, go to a solitary lodging in the country, but who would be most grateful to be allowed access to any place where they might recover their health, and pay cost price for the accommodation and nourishment they received.—Ed.]

The President and Fellows of the Royal College of Physicians have issued cards of invitation to a *conversazione* at the College on Saturday, July 25.

Fatal Poisoning by Decoction of Poppy-head.—A child has died at Bilston in consequence of its mother, the wife of a grocer, having administered to it two teaspoonfuls of water in which a poppy-head had been boiled. The poisonous liquor had been thoughtlessly administered to produce sleep.—*Preston Herald*, July 4.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 23, 1863.

Mr. Partridge, President, in the Chair.

A paper by Dr. William Kramer, from Berlin, was read on

INQUIRIES INTO THE ACCESS OF AIR AND WATER TO THE TYMPANUM, THE MEMBRANA TYMPANI BEING IMPERFORATED.

The view that there is free access of air and water to the tympanum, the membrana tympani being imperforate, has been hitherto generally adopted. The author was very lately induced to put this view to the test by experiments on physical instruments and on dead bodies. He fully described the instruments he used for this purpose—viz., a little glass apparatus, representing the Eustachian tubes, the tympanum, and the membrana tympani, a set of silver ear-catheters increasing in calibre, and an india-rubber ear-catheter. The following are the deductions he arrived at from four experiments:—1. There is no free access of air or water to the tympanum if blown in or syringed through a silver ear-catheter, the Eustachian tube being completely pervious. 2. There is free access of air or water to the tympanum if blown in or syringed through an india-rubber ear-catheter pushed forward to the osseous part of the Eustachian tube. 3. The perception of sonorous sounds of the air blown into the Eustachian tube through the author's smallest-sized silver ear-catheter, proves the Eustachian tube to be completely pervious. 4. The perception of dull, faint, or no sound at all of the air blown through silver ear-catheters of any size, proves the Eustachian tube to be incompletely or not at all pervious. Certain peculiarities in the perception of these sounds in living men render it most likely that air, blown into a narrowed Eustachian tube through silver ear-catheters of a gradually increasing size, enters the tympanum, the membrana tympani being imperforate.

A paper by Geo. Southam, F.R.C.S., Surgeon to the Manchester Royal Infirmary, was read on

CASE OF POPLITEAL ANEURISM CURED BY DIGITAL COMPRESSION.

The patient was in his thirty-third year, an iron-moulder by trade. From the man's account, the disease did not appear to have been of more than nine or ten weeks' duration. He was admitted into the Manchester Hospital on the 29th of December, 1862. The right popliteal space was distended by a pulsatile swelling, accompanied by severe pain and general œdema of the leg. The pulsation of the tumour was very perceptible, but feeble, and the skin over it slightly discoloured. His countenance bore indications of severe suffering. Pulse 120, small and quick; appetite bad. So urgent did the case appear that clamps were immediately applied over the femoral artery. The limb was enveloped in flannel bandages, and elevated on pillows; bottles of hot water were placed near, to raise the temperature of the foot and leg to the natural standard. The following day the clamps were removed, as they had produced redness and vesication of the skin. Iodide of potassium was now prescribed, and regularly taken until the 20th of January, with no apparent improvement. Digital compression was then resorted to, twelve students of the institution having volunteered their services. During the first twenty hours this system of pressure was frequently interrupted, and therefore at the end of this period the pulsation had apparently undergone no change. Consequently, two students were directed to be continually with the patient, one to compress the artery, the other to apply his hand over the aneurism to detect any insufficiency of the pressure. This plan was adopted for twenty-four hours: a very slight pulsation only could then be felt in the tumour, and six hours later it had entirely subsided. Moderate pressure was, however, kept up for another day, and then discontinued, as there were no signs of any further pulsation. From this time the case proceeded very satisfactorily, the man leaving the hospital at the end of three months with scarcely any remaining trace of the disease. Mr. Southam considered that pressure must now be regarded as the established system of treating aneurismal tumours whenever practicable; but the best mode of applying it is still a subject for discussion. In the present case the vitality of the limb was evidently too much impaired to admit of the application of instrumental pressure; indeed, the unusual size of the tumour, the unsatisfactory condition of the surrounding parts, as well as the patient's general health, formed in themselves serious obstacles to any kind of operative interference. Many are the advantages of digital over instrumental compression. Not only does it seem to effect a cure in a shorter period of time, but with much less pain, and is not so likely to lead to sloughing of the structures under pressure, which, with the greatest precaution, is liable to occur in some cases. The flow of blood through the aneurism may not be so effectually prevented by this means, and indeed this is not to be desired, as fibrillation of the blood is more likely to occur, and to be more permanent, if allowed to pass through the sac in small quantity and in a slow continuous stream; for digital compression is not liable to those sudden alternations in force and volume which under instrumental pressure are apt to take place in consequence of the tendency of the artery to escape from under the clamps on any slight movement of the limb. But pressure alone must not be entirely relied on in the treatment of aneurism; for as success depends on the consolidation and subsequent absorption of the blood in the tumour, other agents of similar properties, to combine with, must be sought for. The difficulty in arriving at correct views of the Medical treatment of aneurism is probably owing to our imperfect knowledge of the changes which contribute to the solidification of the aneurismal contents. The process is usually regarded as similar to the coagulation of the blood out of the body; but it is questionable if this be exactly so where the solidified material is partially absorbed or converted into structure. Ordinary coagulation of the blood is one consequence of its diminished vitality, and therefore would more likely be followed by its removal from the body by ulceration and suppuration than by absorption. It seems, therefore, highly probable that the solidification of the blood within the body, previous to its absorption or conversion into tissue, differs somewhat at least from that of ordinary coagulation. This may explain how low diet, which, by depressing the vital properties of the blood, should promote its coagulation, has not led to those salutary results expected by its advocates in the treatment of aneurism.

A paper, by Dr. J. W. Ogle, was read, on

THREE CASES OF ICHTHYOSIS SPURIA VEL SEBACEA.

After certain preliminary observations regarding the differences between the true ichthyosis (so called) and the spurious, the latter of which owes its characteristics to an accumulation of secreted material from the sebaceous follicles of the skin, which become indurated and adherent to the surface, Dr. Ogle proceeded to describe the cases of two sisters who were afflicted with the ichthyosis sebacea. These patients were respectively of ten and fourteen years of age, living in the neighbourhood of London. They had both been vaccinated about five years before they came under treatment, and shortly after vaccination had become the subjects of a scattered pustular eruption, which assumed the form of open sores, and were succeeded by a roughness and dryness of various parts of the skin—viz., about the knees, down the legs, about the elbows and axillæ. This condition gradually increased until the parts became covered by large patches of dark brown and almost black incrustations, which were broken up into scales or small tubular or lozenge-shaped portions, divided by deep lines according to the natural creasings of the skin. Owing to these concretions, the surface was harsh and dry, and in many parts the surface had much the appearance of the sole of the fowl's foot. Dr. Ogle showed a water-colour drawing, executed by Dr. Westmacott, of the surface of the foot of one of the patients, and also a quantity of the dry concretions which fell off, under treatment, from the skin. The treatment consisted in the warm bath daily, and the subsequent rubbing in of lard, along with the liquor galii aparine, followed by the use of an alkaline lotion in the place of the lard infriction. In about five weeks the patients were dischargrd quite free from any traces of the affection. The patients remained free from the disease for nearly four months, when they both again became affected in a like way as before, and one returned to St. George's Hospital. She was treated by Dr. Fuller, and again left the Hospital free from any of the sebaceous accumulations, but with the skin red and glazed, and disposed to crack. Dr. Ogle gave the chemical analysis of the sebaceous incrustations as determined for him by Dr. Harvey, and also made reference to the only recent case of a similar kind which he had met with—one by Dr. Biefel, quoted in the "Annalen de Charité Krankenhaus." From this, and from the tendency which in the case of one of the girls before described the skin showed to assume an unhealthy state, Dr. Ogle thought that such a condition of the skin might lead to actual disease of its texture.

A paper by **John Cockle**, M D., was read on a

CASE OF TRANSPOSITION OF THE GREAT VESSELS OF THE HEART.

The subject of the case was a boy, who lived to the age of two years and eight months. He was born at the full period, perfectly healthy, and remained so until the end of the third month. He now became cyanosed, and suffered from cough and dyspnœa. His lower limbs were always weak; he was also very sensitive to cold. Under emotion the cyanotic tint darkened, and the dyspnœa and habitually increased impulse of the heart would be still further increased. No convulsions, however, occurred. The child was remarkable for unusual intelligence. Eventually he lost flesh, and became dropsical and covered with petechiæ, and died apparently from exhaustion. The heart was found dilated and hypertrophied. The aorta arose from the right ventricle, and divided into its ordinary branches. The pulmonary artery, with its valves very large, arose from the left ventricle, and normally divided. The ductus arteriosus was perfectly closed. Foramen ovale largely patent. Septum ventriculare perfect. The various orifices and valves healthy. The mitral valve, however, was, as it were, tricuspid. The left lung was in part unexpanded. The author has found that the number of cases of transposition recorded amounts to about thirty-two. Only three cases, however, are on record in which the foramen ovale was alone patent, the arterial duct being closed, and the ventricular septum entire. In such cases, were it not that some interchange of blood occurred through the foramen ovale, two perfectly distinct circulating systems would have existed. No other vessels certainly compensated in this case.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JUNE 3, 1863.

Dr. **Greenhalgh**, President, in the Chair.

The following gentlemen were elected Fellows:—E. Barker, Esq., Dr. Jos. G. Barratt, Gwynne Harries, Esq., Dr. Hibberd, Dr. J. J. Nason, Josh. A. Tapson, Esq.

Mr. L. R. **Cooke** read a case of

SIMULTANEOUS UTERINE AND EXTRA-UTERINE GESTATION PROCEEDING TO THE FULL TERM OF GESTATION.

E. R., aged 39 years, who had had three previous natural deliveries, was taken in labour on December 8, 1862. She had suffered no very unusual amount of inconvenience during her pregnancy beyond dragging pains, and an unusual sense of weight in the abdomen. On external examination, the abdominal swelling was found to differ from its normal characteristics, in having its greatest prominence considerably to the left side, and about on a level with the umbilicus; the whole tumour being also more circumscribed, well defined, and spherical in form than usual. The limbs of a fœtus were distinctly traceable through the abdominal walls, and a placental souffle was audible over a large portion of the tumour. A vaginal examination showed the canal much elongated, its rugæ obliterated, and the os uteri drawn up beyond reach of the fingers. Suspecting therefore an abnormal gestation, Mr. Cooke requested Mr. Spencer Wells to see the patient with him, and he attended with Dr. Kuman, of Vienna. It was thought there were two sets of fœtal heart sounds, while the extensive surface over which the placental bruit was heard gave a suspicion of two placentæ. Whether the fœtuses were both intra-uterine, or an ovarian tumour present also, was uncertain. At this time the pains were so slight and at such long intervals, that the patient was left, the bladder having been emptied, and a grain of opium administered, instructions being given to send for Mr. Cooke on the occurrence of expulsive pains or of any change in the patient. She passed a good night, and the uterine pains had been gradually re-established during the next day. At six o'clock p.m. Mr. Cooke was sent for, and found her in strong labour. Making an immediate examination, the sacral concavity was now found occupied by a firm, resisting, rounded tumour, presenting no trace of fluctuation, and immovable under a very considerable degree of force employed between the pains. Its presence reduced the outer posterior dimension of the inlet to less than two fingers' breadth, through which no os uteri was discoverable; but resting on, and anterior to, the symphysis pubis, a small portion of the convex cranial surface of a fœtus was to be felt. Dr. Greenhalgh and Mr. Meates, of Chester-square, saw the patient. The diagnosis was still a matter of doubt, because the tumour was not traceable abdominally, the uterus being in front more or less; and examined per vaginam, it might equally have been taken for a solid tumour or a pedunculated fibrous outgrowth from the uterus. The obvious indication was to deliver the woman as speedily as possible, as the severity and frequency of the pain threatened rapid exhaustion of her strength, if not rupture of the uterus. Perforation of the head of the fœtus was considered inadmissible, from the almost impossibility of getting at it and fixing it, and because also, even supposing it accomplished, evisceration and dismemberment under the same difficulties would have been equally necessary. It was decided therefore to put the patient under chloroform, so as to suspend the action of the abdominal muscles, in order to endeavour to displace the tumour and turn the child; and failing that, to perform Cæsarean section. The former being done, the tumour was pushed out of the vagina with some difficulty, and delivery completed by version. The placenta being removed, and the uterus not contracting satisfactorily, the woman, moreover, being much exhausted, it was thought advisable to avoid any manipulation of the abdomen with a view to discover the nature of the remaining tumour. She never entirely rallied from the shock and exhaustion from the operation, and died within forty-eight hours. The autopsy was made four hours after death, Dr. Greenhalgh, Dr. Kuman, Mr. Spencer Wells, Mr. Meates, Mr. Colborne, and Mr. R. L. Cooke being present. On opening the abdomen and reflecting the walls, the first thing revealed was the body of a full-grown female fœtus contained in its proper membranes, which were unruptured, and distended with liquor amnii. The anterior or external surface of the chorion was perfectly smooth, and in immediate relation with the abdominal peritoneum. Beneath the tumour the uterus was seen, partially contracted and unruptured. There was a large quantity of greenish-brown, grumous fluid in the peritoneal cavity. On opening the fœtal membranes, and removing the fœtus, it was found that the placenta was situated in, and firmly attached to, a shallow capsule, formed of the expanded and enlarged fimbriæ of the right Fallopian tube, which, on its convex or peritoneal aspect, was firmly tied down by numerous and very tough bands of old adhesion. A stylet could be passed along the tube to its expanded extremity, when it became arrested by the placenta. The author remarked that the lessons derivable from this case appear to be mainly,—1. That in cases of doubtful tumours complicating parturition, it may be well to discover, as far as may be, whether there is any evidence of an extra-uterine fœtation as soon as possible after uterine delivery. 2. Whether, in case of such a discovery, the probability is or is not that the adhesions of the tumour may be so firm and numerous as to render gastrotomy inadmissible. 3. Whether, supposing the existence of such adhesions to be admitted, it is advisable or justifiable to remove the fœtus alone, with the certainty of a portion of the liquor amnii escaping into the peritoneal cavity, and with the possibility of the placenta becoming encysted, and being thrown off at a future period.

Dr. **Greenhalgh** remarked that the case so ably narrated by Mr. Cooke was most interesting in a diagnostic and practical point of view, and he believed was without parallel in the annals of obstetric Medicine. He drew attention to the remarkable absence of abnormal symptoms during pregnancy, to the extreme anteversion of the womb, and to the influence of the labour pains in forcing the extra-uterine fœtus from its position in the abdomen into the pelvis, and so occasioning an obstacle to the passage of the intra-uterine fœtus.

Dr. **Graily Hewitt** remarked that this was a case possessing very great interest, and it was a most unusual one. The observation made by Mr. Wells as to the presence of two distinct sets of fœtal heart sounds antecedently to the commencement of the labour was conclusive as to the fact that both the intra-uterine and the extra-uterine fœtus were of simultaneous origin—were, in fact, twins; otherwise it would have been just possible that the extra-uterine fœtus might have been the product of some previous impregnation.

Dr. **Rogers** could not agree with the last speaker (Dr. G.

Hewitt) in the supposition that the fœtus found in the abdomen might be the product of an anterior conception to the one removed from the uterus. The facts stated by Dr. Greenhalgh, Mr. Cooke, and especially by Mr. Spencer Wells, proved, he thought, that the two were conceived at the same time, and were twins.

Mr. Spencer Wells said that Mr. Cooke had suspected the existence of an extra-uterine fœtus before he (Mr. Wells) had been called in; and it was the evidence of the presence of two living children, afforded by the sounds of two fœtal hearts—one heard under the right false ribs, and the other in the left iliac region—which had put them all off the track indicated by Mr. Cooke, as it certainly did not occur to them to suspect the presence of two children, both alive and at the full term, one within and the other without the uterus. He (Mr. Wells) had been called in on previous occasions of suspected extra-uterine pregnancy, where it had been feared that gastrotomy might be necessary; but in every case the child had proved to be within the uterus; although, from the extreme thinness of the abdominal walls and uterus, in some cases the child seemed to be covered by scarcely anything more than skin. The only thing apparent in this case, uncommon in cases of twin pregnancy, was the very loud sound of the placental murmur; and this might become a valuable indication in future cases. In this case it was supposed to depend upon the large size of the placenta. He (Mr. Wells) examined per vaginam, and thought he made out a breech presentation; but, as he had not practised midwifery for many years, he was not very confident about it, and advised Mr. Cooke, if he met with any difficulty after labour had fairly set in, to consult some experienced accoucheur.

Dr. Rogers asked Dr. Greenhalgh what course he would have pursued had he known that the tumour he felt likewise contained a living fœtus?

Dr. Greenhalgh, in answer replied, that had a living fœtus been detected after the delivery of the first, and the patient's condition been such as to justify an operation, he should have performed gastrotomy, which would almost certainly have saved the child, and given the mother as good a chance of recovery.

Dr. Cleveland wished to know whether the post-mortem examination had revealed such a condition within the abdomen that if gastrotomy had been performed soon after the birth of the first child there would have been a reasonable probability of a successful result.

Dr. J. Braxton Hicks considered this case a most interesting one, and he believed unique. He wished to know whether there was any trace of the old chorion villi upon the unattached portion of the ovum, as it was almost impossible to explain its free state, except that it must have been wholly included in the infundibular end of the tube up to the time of the formation of the placenta, and that by its growth it projected beyond it at a later period. He agreed with Dr. Greenhalgh as to the rule of excision of the child in such a case—namely, if the child were dead it would be best to leave it untouched, in order that adhesions might form—a point he had brought forward in the *Guy's Hospital Reports* upon two cases of extra-uterine fœtation he had operated upon. If the child were living then it would be an important question whether it should not be removed by abdominal section, in the manner suggested in the above paper, stitching the edges of the opening of the cyst to those of the outer wound before removing the child, leaving the placenta to come away of itself.

Mr. Cooke said the surface appeared to be entirely free from traces of chorion processes.

Mr. Spencer Wells said the question raised by Mr. Cleveland as to the practice which ought to be followed in any similar case was one of great importance. Supposing it were known that a child at the full period of pregnancy was extra-uterine, what ought the Surgeon to do? He (Mr. Wells) questioned the morality of the principle suggested by the President and Dr. Hicks, that the rule of practice should depend upon the child being alive or not. If it were true that when the child is dead, women, as a rule, live for many years, and do not suffer very much, it could hardly be right to subject a patient to a very dangerous operation on the slender chance of the child surviving. It seemed to him (Mr. Wells) that the life of the child was only one, and not a very important element in the calculation. Experience was wanting to determine the ordinary duration of the life of the subjects of extra-uterine pregnancy when left alone and when subjected to Surgical operations, and each case must be judged by its own peculiarities. In the case now before the Society, the question of operation had been seriously discussed over the dead body of the patient; and looking to the extensive attachments of the placenta and membranes, it was quite certain that the child alone and the unattached portion of membranes could have been removed. When the great liability of puerperal women to a low form of diffuse peritonitis was considered, it could hardly be expected that in this case the patient could have survived the slow process of separation of the placenta after the removal of the child, and it was very doubtful whether her life would have been lengthened or shortened by gastrotomy.

Dr. Hicks said that the value of the child's life varied much in the estimation of various practitioners. An important element in carefully weighing the relative risks of leaving or removing a live child was, that should any fluid escape into the peritoneal cavity, it would be much less irritating than if the child were dead.

Dr. Graily Hewitt believed that to one at least of the questions raised by Mr. Spencer Wells a tolerably positive answer might be given. Was it justifiable to open the abdomen in order to extract a live extra-uterine fœtus? This question, as was evident from the observations which had fallen from others in the course of the discussion, would not meet with the same reply from all. To the other question—Was it justifiable to open the abdomen to extract a dead fœtus in a case such as that supposed, viz., just after the death had occurred?—he believed a decidedly negative answer should be given. There were abundance of facts on record showing that the dead extra-uterine fœtus may remain for years in the abdomen, giving rise to comparatively little uneasiness; in some cases during the whole of the rest of the patient's life, the woman in many cases during this time giving birth to a numerous progeny. And when steps were taken by nature to get rid of the foreign body, the evacuation was usually effected without much danger to the patient. It was therefore much the safer plan to allow the case to proceed without interference, and certainly at this juncture—viz., just after the death of the fœtus.

Mr. Cooke having replied to the various speakers,

Dr. Greenhalgh exhibited a specimen of Interstitial Pregnancy.

A paper, by Mr. John Marshall, was read on a

CASE OF TUBAL GESTATION—DEATH.

Dr. Graily Hewitt gave a

DESCRIPTION OF THE PARTS INVOLVED, WITH REMARKS.

The patient was married, aged 27, and had had children. On March 31, Mr. Marshall was called to see her, and found her suffering from vomiting, collapse, and severe pain in the abdomen. These symptoms continued for about twenty-four hours longer, at the end of which she died. At the time of the illness she was about two months advanced in pregnancy, and just before death she confessed to Mr. Marshall that she had taken medicine to procure abortion shortly before the illness supervened. After death large coagula of blood were found in the pelvis and abdomen. The uterus and appendages were submitted to Dr. Graily Hewitt for examination. The left Fallopian tube was distended to the size of a sausage, and contained coagula, together with the remains of the placental structures of an ovum. The tube had ruptured at the junction of the inner and middle thirds of its length, and coagula hung by a sort of pedicle from this opening. The placental mass was loosely attached to the Fallopian tube wall, and the walls of the tube were thickened and spongy at the point of placental attachment. The fœtus was not seen, and probably had escaped observation among the coagula in the pelvis. It appeared likely that the rupture of the tube was hastened by the taking of the abortifacient drugs; but under any circumstances rupture would probably soon have occurred, as it is usual in cases of Fallopian pregnancy for rupture to occur at or soon after the third month.

Dr. Cleveland thought the question whether Surgery could be made available in cases of extra-uterine gestation a most important one. It appeared to him that the only probability of success attending gastrotomy would lie in the formation of such an accurate diagnosis as would warrant the performance of the operation while the parts were, so to speak, in a quiescent state; but when rupture and extravasation into the peritoneal cavity had taken place, and the patient was found in a state of collapse, he could not see how, at such a time and under such circumstances, opening the abdomen was to prove of service.

Dr. Graily Hewitt had great doubts as to the practical feasibility of carrying into effect any operative measures for the relief of these cases of rupture in Fallopian pregnancy. The condition of the parts was peculiar, the number of blood-vessels to tie was considerable, and the condition of the uterus and its appendages wholly different from that present in cases where ovariotomy is practised safely. But this was not all. The chief obstacle lay in the difficulty of diagnosis. In by far the majority of cases the circumstances do not enable us positively to determine on the diagnosis. It is not certain in many such cases even that pregnancy is present; and he believed very few Practitioners would be willing to perform such an operation as opening the abdomen on what must, in most cases, be at best a presumption, that the case was one of the kind supposed. Peri-uterine hæmatocele he would mention as one of the conditions not rarely presenting symptoms very closely identical with those of rupture of an extra-uterine pregnancy.

Mr. Spencer Wells said that if it were certain that a patient was dying from internal hæmorrhage owing to the rupture of the sac of a tubal pregnancy, he could see no sort of difficulty in the way of a Surgical operation. The Fallopian tube and vessels in the hard ligament would be divided and secured exactly as in every case of ovariotomy. The operation would be extremely simple; what the result would be was quite another question. Dr. G. Hewitt's observation of the stricture of the Fallopian tube in this case raised the question as to the date of the constriction. It could hardly have preceded impregnation, or the spermatozoa could not have passed from the uterus to the ovary. These contractions of the Fallopian tube were of greater importance than usually known. He (Mr. Wells) had recently seen a case of death after symptoms of acute pelvic peritonitis and obstinate vomiting; and it was found that apoplexy of the left ovary, and of the subperitoneal tissues around it, had depended upon closure of the Fallopian tube near the uterus by a small cyst, possibly the unimpregnated ovum of the preceding menstrual period.

Dr. Graily Hewitt said the facts of the case related warranted the belief that the stricture of the Fallopian tube led to the detention of the ovum in the tube. The canal might be sufficient to allow of the passage of spermatozoa, but not large enough to allow the ovum to pass. The passage of the ovum along the tube, it must be recollected, did not occur immediately after impregnation; and the turgescence of the uterus consequent on impregnation would tend to render a narrow Fallopian tube still narrower.

Dr. Hicks said Dr. Hewitt's description of this case agreed with his own observations. In the *Guy's Hospital Reports* would be found a case of tubal pregnancy which in its details agreed with this one in all particulars, and also another which corresponded to that of Dr. Greenhalgh. In both cases the villi of chorion were not involved in any way in any decidual structure, but merely applied to the surface with which they came in contact; a slight quantity of plastic matter seemed to assist in holding them together.

Mr. Baker Brown read a sequel to a case of Atresia Vaginæ.

Dr. Greenhalgh read a paper on

DYSMENORRHŒA AND STERILITY.

After taking a rapid glance at the importance, frequency, and close connexion of these affections, he directed the attention of the Fellows to the treatment of mechanical dysmenorrhœa, which a large experience had convinced him was by far the most frequent form of this complaint. Having compared the relative merits of dilatation and division of the os and cervix uteri in this affection, he expressed a decided preference in favour of the latter mode, for the safe performance of which operation he had invented an instrument which he proposed to call the "bilateral mentrotome." He stated that he had used this instrument in upwards of thirty cases without a single casualty, and in the great majority with the best results. After giving a description of this metrotome, which he exhibited to the Society, together with a brief summary of the cases operated upon, and enumerated the affections in which he had found the division of the os and cervix uteri most serviceable, he pointed out the necessity of attending to the pathological states of the uterus frequently induced by the persistence of dysmenorrhœa, and concluded by giving a short account of the plan and remedies which he had found most beneficial for the cure of these several conditions.

OBITUARY.

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JOHN JONES, Esq., M.R.C.S. Eng.

Died, at his residence, 27, Friargate, Derby, on the 23rd ult., John Jones, Esq., M.R.C.S. Eng., aged 75, respected by all who knew him. The late Mr. Jones might fairly lay claim to the title of a veteran in his Profession. A student in the University of Edinburgh, and of Guy's and St. Thomas's, he took his diploma in the year 1809, from which time until the day of his death he was actively employed in works of benevolence connected with his Professional duties. To his Medical brethren he was perhaps best known as the warm advocate of self-supporting Dispensaries, upon the principles first propounded by the late Mr. Smith, of Southam. One of these institutions, founded by Mr. Jones at Derby, has at the present time upwards of 4000 members enrolled on its books, who are thus enabled, by trifling weekly payments, to secure to their families medicines and efficient Medical attendance. In Mr. Jones were happily blended the characters of the practised Surgeon and the Christian gentleman. He was emphatically the poor man's friend. No thought of unrequited service or of personal toil ever withheld him from the bedside of suffering poverty, and the blessings of thousands will perpetuate his memory.

As a member of the Provincial Medical and Surgical Association, he was by no means inactive, as numerous valuable contributions from his pen abundantly testify, and in the pages of various Medical Journals are recorded many important papers to which his great experience gave additional weight.

MEDICAL NEWS.

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Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, July 10, 1863:—

Edward Williams, St. Bartholomew's Hospital; Douglas William Eshelby, University of Edinburgh; Frank William Cooper, Charing-cross Hospital; Robert Edward Gibson, University College; Horace Cooper, St. George's Hospital; Charles Stephen Abbott Atkinson, Norwich; Charles Huthwaite, Peachy-terrace, Nottingham.

The following gentlemen also on the same day passed their First Examination:—

John Wickham Legg, University College; George Thomas Hawkins, Guy's Hospital; Thomas Prince Fothergill, King's College; Allen Wearing, St. Bartholomew's Hospital.

N.B.—The Court of Examiners will meet on Tuesday, July 28, instead of Thursday, the 30th, on which day there will be no Examination at the Hall.—By order of the Court of Examiners, Alfred M. Randall, Secretary.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Allen, Thomas, M.D. St. And., on the recommendation of the Commissioners in Lunacy, his grace the Duke of Newcastle, has been appointed to the office of Resident Medical Superintendent of the Lunatic Asylum at Kingston, Jamaica.

Drummond, E., L.M., has been appointed House-Surgeon and Dispenser to the Chesterfield and North Derbyshire Hospital.

Fox, Dr. Tilbury, has been elected Physician-Accoucheur to the Farringdon General Dispensary and Lying-in Charity.

Jepson, Dr Octavius, has been appointed Resident Medical Superintendent of St. Luke's Hospital for Lunatics.

Mayo, Charles, B.A., M.R.C.S., Fellow of New College, Oxford, Staff Surgeon U.S. Volunteers, has been appointed Medical Inspector of the 13th Corps d'Armée (M'Clernand's, now engaged in the siege of Vicksburg).

Ritchie, C. G., M.D., has been appointed Resident Physician to the Hospital for Sick Children, Edinburgh.

Trench, William S., M.D. Edin., has been elected Medical Officer of Health for the Borough of Liverpool.

Willis, Francis, M.B. Oxon., has been elected Assistant-Physician to Westminster Hospital.

DEATHS.

Catton, Richard T. G., M.R.C.S. Eng., Assistant-Surgeon H.M. 3rd Dragoon Guards, at Admednugger, India, on May 28, aged 29.

Evans, Charles James, M.R.C.S. Eng., at Derby-road, Nottingham, on June 27, aged 37.

Evans, R. W., M.D., at Prescott, Canada, on May 29, aged 47.

Fawthrop, Joseph, L.S.A., at Queensbury, Halifax, on June 28, aged 57.

Hope, Assistant-Surgeon, 57th Regiment, at Taranaki, Nelson, New Zealand, on May 4.

Murdock, William, M.R.C.S. Eng., at Ballycastle, Co. Mayo, on July 2, aged 44.

O'Brien, Francis, Surgeon 69th Regt., recently.

Parday, Charles, M.B. Lond, at Lottery Hall, Southampton, on July 10.

Spear, William, M.D. Aberd., at Cobland House, Totton, Southampton, on June 12, aged 45.

Ware, Samuel, M.R.C.S. Eng., at Chard, Somerset, on July 9, aged 64.

Royal College of Surgeons of England.—At the annual election of Officers of this Institution, Mr. Frederick Carpenter Skey, F.R.S., Surgeon to St. Bartholomew's Hospital, was elected President. Messrs. Joseph Hodgson, F.R.S., and Thomas Wormald, also one of the Surgeons to St. Bartholomew's Hospital, were re-elected Vice-Presidents of the College for the ensuing year. At this meeting of the Council, Messrs. S. A. Lane, of St. Mary's Hospital, George Busk, of the Seaman's Hospital, and Henry Hancock, of the Charing-cross Hospital, the recently elected councillors, were sworn in, and took the chairs lately occupied by Messrs. C. H. Hawkins, Serjeant-Surgeon to the Queen, Thomas Tatum, and William Coulson.

National Medical Registration Association.—The following contributions have been received since our last announcement towards the liquidation of outstanding debts, amounting to £200, and for which the creditors are seeking to make the treasurer, John Lavies, Esq., liable. The treasurer is already £50 out of pocket:—Dr. George Budd, £2 2s.; Dr. John Watson, £2 2s.; Dr. James Duncan, £1 1s.; Dr. Smiles, £1 1s.; Dr. G. Tebay, £1; Martin Ware, Esq., £1 1s.; Edmund Pearse, Esq., £1 1s.; F. Price, Esq., Deptford, £1 1s.; John White, Esq., £1 1s.; W. U. Whitney, Esq., £1 1s.; Edward A. Newton, Esq., 10s. 6d.; Dr. Riding, 10s.; Dr. A. B. Duncan, 10s. 6d.; Hugh W. Statham, Esq., 10s.; Peter Marshall, Esq., 10s.; Carr Jackson, Esq., 10s.; Dr. Henry C. Andrews, 10s.; George Booth, Esq., £1 1s.; Henry Hancock, Esq., £2 2s.; Haslar Harris, Esq., £2 2s.; W. A. Harrison, Esq., £1 1s.; Dr. Routh, £2 2s.; Dr. Semple, 10s. 6d.; Dr. A. Clark, 10s. 6d.; Dr. Richards, 10s. 6d.; Dr. Morgan, £1; C. Ridley, Esq. £1 1s.; Dr. Fraser, 10s.; Thos. Hazel, Esq., 10s. 6d. Subscriptions should be sent direct to John Lavies, Esq., 5, Great George-street, Westminster, in aid of the fund.

Accidental Death Insurance Company. — The annual report of this company shows very satisfactory progress in its business. The premiums received from all sources during the year amount to upwards of £65,776, against £47,878 in 1861. The claims during the year were £34,579 4s. 7d., giving a total, since the commencement of the society, of no less a sum than £215,579. The entire business of the company is now carried on at the offices in the Old Jewry. The year having terminated by a large reduction in the expenses of the company, and a large increase of premiums from all sources, it is not unnatural to suppose that the company will prosper, and maintain itself in the front rank of kindred institutions, of which it is the parent.

Refusal to Bury.—At the Southwark Police Court on Tuesday, July 14, Mr. Sturmy, the vestry clerk of St. Saviour's, accompanied by Mr. Bianchi, the Medical officer of the district, waited on Mr. Burcham for advice. Mr. Sturmy said that that morning the inspector of nuisances to St. Saviour's district had been informed by some poor people in a close neighbourhood that typhus fever had been raging in one of the houses, and that a man had died from that disease. Since the death all his friends had deserted him, and the neighbours were alarmed lest the fever might spread among them. Dr. Bianchi proceeded to the house in question, in Surrey-row, Blackfriars-road, where he found the corpse in a state of decomposition, sending forth such an offensive smell as to make it dangerous to the health of the neighbourhood. It was requisite that the corpse should be immediately removed. The parish authorities had been applied to, and the churchwardens had given an order for its removal, but Mr. Horley, the relieving-officer, refused to carry out the order. Mr. Burcham thought it would be the duty of the relieving-officer to have it removed, especially as the guardians had desired it. He, however, did not think he had any power to interfere. It must be done by indictment. Dr. Bianchi hoped the magistrate could have interfered in the matter, as it was really very serious. An offensive effluvium emanated from the corpse, and, unless speedily removed, disease might spread in this crowded neighbourhood. He presumed that the magistrate had the power to order its removal under the Nuisances Removal Act after certificates had been obtained from the proper Medical authorities. Mr. Sturmy said that sooner than have the corpse remain in the house, causing alarm to the inhabitants, the vestry would remove it and have it buried immediately. Mr. Burcham thought that would be the best course to adopt, as there was no one to claim the body.

Still-born Children.—The recent discovery of infant remains in an undertaker's back premises seems to throw light on many cases of supposed infanticide. It has been repeated constantly of late, that this crime is on the increase; and perhaps there is foundation for such a statement. But it is in the highest degree illogical to jump at a conclusion of murder whenever the dead body of a child is found hidden away in some obscure corner. Premature and still-born children are sadly common among the overworked mothers of our labouring population, and it is a heavy tax on the family earnings for the week to provide these with decent burial. Even an unbaptised infant cannot be interred for less than five shillings, and this sum is about doubled if the rites of the Church be performed over one received into its pale. How strong is the temptation to conceal the poor relics of what has perhaps never really lived in the full sense of independent existence. It is nearly a year since Dr. Aldis and Dr. Druitt, as Medical Officers of Health to the parish of St. George's, drew attention to these facts, and added by anticipation a comment fully borne out in the recent disclosures. "Respecting the infants' deaths, the body of one was found in the Grosvenor-dock, and the jury at the inquest found by a verdict that it was *still-born*. This induces us to repeat what we have said before, viz., that the children whose bodies are found in the streets, the park, or the water of the Serpentine or Thames, must not be assumed to be all murdered. Some of them are undoubtedly still-born;—some murdered—some so decomposed when found that it is impossible to say what may have been the mode of death; but most certainly in many cases the discovery of the body is evidence only of the simple fact, that the parents were too poor to bury a still-born child, and took the summary though scarcely decent mode of throwing it away —or that the undertaker did so. We think that these matters ought to be made known, in order that measures may be taken, if it should be desirable, for lessening this public scandal." And now lately they have returned to the subject in noticing the discovery of two "males newly born," one in Hyde-park, another on the steps of a house in George-street, Hanover-square. The jury in both instances attributed death to pressure during labour. Public ends are never served really by falsehood, and reforms are retarded by being urged in reliance on facts mis-stated or carelessly observed. While, therefore, all proper measures ought to be adopted for the prevention of infanticide, great caution should be exercised in attributing to this cause infants' deaths not otherwise accounted for.

The Islington Child Murder.—Since the inquest was opened on the remains of the unfortunate child, Elizabeth Hunter, on Tuesday last, the lower jaw has been found, close to the spot where the head was buried. This, with the exception of the bones of the sternum, a number of the phalanges of the toes and fingers, and one of the knee-caps, added to the bones already found, completes the skeleton. The missing bones, being soft and undeveloped in a child of tender years, have no doubt yielded to the action of the lime used to destroy the clothes and flesh, and have become disintegrated and mingled with the soil of the dirt-heap in which they were hidden. There seems to be some little misconception as to the precise spot in which the bones were found; it will therefore, perhaps, be as well to give a description of it. The place in which the discovery was made is an ordinary gabled hothouse, on each side of which is a wooden stage containing flower-pots. Underneath the stage run two earthenware stove-pipes, about two feet from the ground, and between them and the wall is a dirt-heap, about a foot in width. The only way of getting to this dirt-heap, in the exact centre of which the body was buried, is by a very narrow passage at one end, between the end wall and the flower stage. In the wall of this passage is a door leading to the outhouse in which the lime was kept. The culprit must have dug the grave almost on all fours, for there is no room to stand upright between the staging and the dirt-heap. It will be seen from the above description that the murderer must have been well acquainted both with the construction of the hothouse and with the place in which the lime was kept. From the position in which the bones were found, and from no marks of violence being visible on any of them, there seems to be no room for the supposition that any mutilation took place either before or after death. It seems somewhat strange that on finding the head Mr. Rowe did not seek further into the matter, or at any rate inform the police of so suspicious a circumstance as the discovery of a decaying human skull in a hothouse to which he and his own people only had access. The reddish tint seen on the fragments of the clothes found along with the bones, and supposed by the Coroner to be blood stains, is fully accounted for by the fact of the little frock having been originally of that colour. The prisoner Clark bears a very indifferent character in the neighbourhood. About two months before the child disappeared he was charged at the police-station with having criminally assaulted another young girl, whom he had enticed into the nursery garden; but as nothing could be proved beyond his having held a handkerchief over her mouth to stifle her cries, the charge fell to the ground. The inquest was continued on Wednesday, but nothing of importance was elicited. The inquiry is again adjourned.

Filling a Museum.—Washington letters state that there are at present at the Army and Medical Museum in Washington about 1000 Surgical specimens, 150 Medical specimens, and 300 specimens of missiles used in warfare. A portion of the bone, both sides of the fracture, when amputations are performed by Army Surgeons, have to be sent to the Surgeon-General for inspection, and the specimen is placed in the Museum, with the Surgeon's name attached to it, as a record of either the good or bad operation performed. This Museum, it is said, already combines more Surgical and Medical specimens than any Museum of the kind in Europe. The specimens are illustrative of gunshot wounds, shell and sabre wounds, injuries and affections. Accompanying such specimen is a description stating where the wound was received, how treated, the result, and by whom treated. Mr. Corcoran's spacious building near New York Avenue has been secured, and is being fitted up for the new Medical Museum.—*American Paper.*

NOTES, QUERIES, AND REPLIES.

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He that queſtioneth much ſhall learn much.—*Bacon.*

Swineshead—We have received no particulars of the case. Our correspondent seems to have met with scant justice.

Our obituary is stictly limited to members of the Medical Profession.

Some good has accrued to the Profession at Bedford from the correspondence which appeared in a Medical contemporary in reference to the meeting of Drs. Burrows and Wharton with Mr. Coombs, a Homœopath, for the result has been the formation of a Medico-Ethical Society in that town. At the preliminary meeting the following resolution, casting a reflection on the fairer half of the body Medical at Bedford, which we cannot bring ourselves to believe they deserve, was passed:—

"That in the opinion of this meeting, the practice of Medical men, or their wives, calling upon newcomers in the town or neighbourhood with the view of either directly or indirectly securing them as patients, is derogatory to the Profession; and that the present meeting earnestly recommends that in future the strictest regard to Professional etiquette should on all occasions be observed by members of the Profession."

Male touting for patients is simply despicable; but the bare idea of touters in crinoline, armed with parasols and mother-of-pearl card-cases, is enough to originate a Medical order of celibacy. Mr. Coombs, the whilom Homœopath, at the same meeting made a public renunciation of his heresy, but curiously enough refused to lay aside his title of Doctor derived from a Homœopathic College. Thereupon the meeting passed a resolution, congratulating him on his repudiation of Homœopathy, but declining to meet him in consultation whilst he used the obnoxious diploma. Rightly so, we think. For an orthodox Physician to practise with an Homœopathic degree is as incongruous as for a Queen's ship on going into action to run up the black flag of piracy. If Touchstone wishes to exchange the plaudits of the booth for the society of sensible men, he must first cast his motley, and renounce his bauble.

We have been requested to give publicity to the following circular:—

"*Medical Provident Association.*

"Dear Sir,—For some weeks past, I have suspended all action with regard to the above project, in consequence of the expectation entertained by a gentleman in this neighbourhood, that the actuary to a leading insurance office was about to visit at his house. I was led to believe that I should have an opportunity of discussing the whole matter with the expected guest; and I hoped to be able to put something definite before you as the result of his counsel.

"The expected visit has, however, been postponed; and I have therefore consulted Mr. Williams, Actuary to the English and Scottish Law Life Assurance Office, 12, Waterloo-place, S.W. He thinks favourably of the project, but wishes a personal conference in lieu of a protracted correspondence. My going to London for this purpose will involve certain expenses, besides a fee to Mr. Williams, whose ultimate charges will depend upon the number and complexity of the tables he is required to draw. I have already spent as much money about the matter as I feel inclined to spend; and I therefore appeal to those gentlemen who are interested in the subject for a contribution towards preliminary expenses. Five shillings from each one who has written to me will be sufficient for the present, and until Mr. Williams has made a definite report.

"In the event of the society being formed, the whole of the preliminary expenses ought, I think, to be divided between the first two hundred or three hundred members, as a committee of management may decide, and any sums now received by me I shall keep an account of, in order that they may be eventually credited towards the first year's subscription of the respective senders.

"Unless a speedy and sufficient response be made to this circular, the matter must, as far as I am concerned, fall to the ground; but, if I receive an adequate sum within a reasonable time, I will place before the Profession a carefully considered scheme for their acceptance or rejection. Remittances may be made either by stamps or post-office order.

"I am, dear Sir, very faithfully yours,
"Robert B. Carter.

"Beeches-green, Stroud, Gloucestershire, July 12."

On the Preparation of Flesh Meat so as to Insure a better Food Supply.

By Henry McCormac, M.D., Belfast.

I read with the greatest interest Dr. Mapother's very able paper (see *Press*, March 25), "On the Preparation of Flesh Meat so as to Retain the Blood." This paper came upon me with a gratified sense of surprise, since, irrespective of the importance of the subject, it is one in which, as affecting our food supplies, and secondarily, or rather primarily, as relating to the more humane extinction of life in animals designed for food, I have taken a lively though perhaps intermitting interest for the last twenty years.

The argument has been so ably set forth by Dr. Mapother that it is quite unnecessary to go into it afresh. I wish, however, to supplement what he has said by some few additions. First, I should wish to observe that the amount of blood in the organism is even greater that what he has assigned. The red colour of meat, as exposed for sale, is entirely owing to the blood retained, partly owing to atmospheric pressure in the capillaries. The pretension, therefore, to eat meat entirely deprived of blood, is quite illusory. For what is flesh but solidified blood? Meat, indeed, could not be freed from fluid blood, in entirety, without maceration. This would deprive it of all savour, and very much abate its nutritive qualities. Now, this is precisely what happens when meat is salted down, as indeed Dr. Mapother has shown, and is in effect one of the causes, if not the chief cause, why a diet of salted meats is provocative of scorbutus. For scorbutus is entirely a disease of anæmia—in a word, it is anæmia, an anæmic disease, as produced by a prolonged dietary of macerated flesh meat. Flesh meats, as salted down, are macerated not only for months, and sometimes for years in salt water, but they actually undergo two other macerations—one in cold water to render them less salt, and the other in warm water in order to cook them. The procedures for preparing food by salting should be greatly modified, if not even entirely superseded. But into this matter I shall enter presently.

It is many years since I witnessed carsonised meat, so termed, as exposed for sale in Liverpool. It was dark in colour, as game is, for the simple reason that the blood has not been drained out of it. I do not, however, like entirely the manner in which carsonised animals are deprived of life. I would much prefer pithing, that is to say, the insertion of a pointed instrument or dagger into the *tuber annulare*, as reached through the ʌ space that subsists between the base of the cranium and the first vertebra. Penetration here is productive of instant and almost painless death. It is astonishing how slowly changes the most obvious and desirable ensue. For surely it is desirable at once, for our own sakes and others, that animals designed for food should not experience one moment's avoidable suffering. But pithing is not the only way of avoiding suffering. Immersion in an atmosphere of chloroform, or of carbonic acid gas, would be productive of painless extinction. The *Grotto del Cane* has been exhibited in Italy for generations, and yet no human being seems ever, hitherto, to have thought of employing it as a means of ensuring painless death. It produces, in fact, perfect anæsthesia, and it would only be needful to drive animals designed for food down an inclined plane, into a chamber filled with carbonic acid gas, to insure the immediate and painless extinction of life. The blood, charged as Dr. Mapother has shown, with every nutritive ingredient, would be preserved, and the animal would be spared the infliction of a needless pang.

I said, just now, that I would advert to the question of salted provisions. The addition of sugar renders less salt available. Again, if boiling be resorted to, followed by complete exclusion of the atmosphere, salt, unless for seasoning, is rendered quite superfluous. Lastly, meat, fish, flesh, and fowl, to wit, if subjected to the vapour of sulphurous acid gas, otherwise burning sulphur, will keep perfectly fresh for a long period, without any other addition whatever. When I was last in Paris, some three years back, meat, as legs of mutton and the like, thus treated, and brought during the very hottest portion of the year from Algiers, were hung up for I know not how long without the slightest appreciable change. I only wish to add, finally, that no portion of the blood of animals, when drawn, should be suffered to go to loss. With the addition of suet, spices, meal, all is convertible into puddings, the *blutwurst* of the Germans, a most savoury and wholesome food.

Belfast, July 11.

The Proposed Amendments to the Medical Act.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—You will greatly oblige me by answering the following question through the medium of your valuable Journal, viz., "Will the proposed alterations in the Medical Act, should they become law, affect Surgeons who are at present keeping open shop; or, in other words, will they be allowed to continue to keep open shop after the passing of the Act?" I am, &c.
B.

Durham, July 13.

[*₊* There is no amended Medical Act before Parliament at present, and it would be premature to offer an opinion until the clauses of amendment have been discussed.—Ed.]

Nitrate of Silver in Preventing the Pitting of Small-pox.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—If Mr. Higginbotham will look over the *Medical Times and Gazette*, for December, 1855 or 1856, he will find that he has been anticipated in the application of nitrate of silver for the prevention of pitting in small-pox; he will also find that Dr. Roward, to whom I refer, used the solution of the nitrate of silver in like proportion, viz., "four scruples to four drachms of distilled water;" with this difference, however, that Dr. Roward recommended the solution to be applied as early as the second or third day of the eruption, Mr. Higginbotham not till the fourth or fifth day. I may also mention that another gentleman, whose name I forget, claimed priority to Dr. Roward. The article setting forth this claim will also be found in the *Medical Times and Gazette*, in one of the numbers not long after Dr. Roward's article was written.

Shortly after having perused those articles in the *Medical Times and Gazette*, two excellent cases came under my care for testing the usefulness of the application of strong solutions of nitrate of silver in small-pox cases Two little misses, sisters, aged 10 and 13, had confluent small-pox. I applied the solution to the face and neck as directed for three successive days. Not a trace of the small-pox was left (behind) on those parts where the solution had been (so freely) applied. Not long after this, two young ladies, aged about 19 and 21, also sisters, and cousins to the former patients, had an attack of small-pox; they were not such bad cases as the former. Nothing was done for them beyond domestic treatment; they were considerably marked with the small-pox, and the scars or pits, I am informed, remain very distinct to this day. I say informed, for I have not seen any of the patients for some years.

I am, &c.

Blantyre, July, 14. T. Downie, M.D. St. And., L.C.P. Ed.

Poor-law Medical Reform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I shall feel obliged by your giving insertion to the annexed correspondence, which, I regret to say, gives no hope of any amelioration of the condition of the Poor-law Medical Officers this session.

I am, &c. Richard Griffin.

12, Royal-terrace, Weymouth, July 11.

"12, Royal-terrace, Weymouth, July 8.

"Sir,—On the 22nd June I had the honour to forward to you as the chairman of the Select Committee on Poor Relief, certain documents which I desired might be laid before the Select Committee. May I ask the favour of your informing me if they have been received, and also if they have been considered, if not, when they are likely to be brought under the notice of the Select Committee? These documents I hold to be very important, as they not only contain a refutation of all the material points in Mr. Cane's evidence, but also prove that the present regulations for the Medical relief of the poor require material changes before they can be made to approach anything like perfection, and therefore I trust they (the documents) will receive attention.

"I have the honour to be, Sir, your obedient servant,

"The Right Hon. C. P. Villiers, "Richard Griffin.
Chairman Select Committee Poor Relief."

"Poor-law Board, Whitehall, July 10.

"Sir,— I am desired by Mr. Villiers to inform you that the Select Committee on poor relief have taken no evidence in the present session, and also to return to you the documents which you forwarded to him on the 22nd ult., as the Committee will not sit again during the session.

"I am, Sir, your obedient servant,

"Richard Griffin, Esq." "Hugh Owen.

Medical Advertisements.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—It struck me on reading the enclosed advertisement, that as the advertiser wishes publicity by appearing in print, I should be furthering his ends by sending the enclosed to you, knowing that you always endeavour by the means of your valuable Journal to uphold the dignity of the Profession, and abhor any approach to puffing or quackery. I leave it to you to notice or not as you may think proper.

I am, &c.

North Wales, July 14. A Constant Reader.

"Amlwch, Anglesey:—Professional Notice.—Doctor Bellis, Surgeon, has the honour to inform the Gentry and inhabitants of Amlwch, and the surrounding district, that he has succeeded to the practice of Dr. Chambres, and begs respectfully to solicit the same patronage and support which were so liberally bestowed on his predecessor. Doctor Edward Bellis, Surgeon, is a Licentiate in Medicine of the King and Queen's College of Physicians, Ireland; Licentiate in Surgery of the Royal College of Surgeons, Ireland; Licentiate in Midwifery of the Royal College of Surgeons, Ireland; Licentiate in Medicine of the Royal College of Surgeons, Ireland; Licentiate in Midwifery of the Coombe Hospital, Dublin.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The enclosed card was given me by a patient of mine a few days ago, at the same time stating that it was handed about from door to door much in the way a new butterman or cheesemonger would send round his circulars. As the object of the person is evidently publicity, I hope you will give him a helping hand in your extensively circulated Journal.

I am, &c. R.

"Mr. Rumboll, Surgeon and Accoucheur, 22, Ashly-crescent, Shepherdess'-walk, Member of the Royal College of Surgeons, Licentiate of the Apothecaries' Company, registered according to the new Medical Act, formerly Clinical Clerk and Dresser to St. Thomas's Hospital, at home for consultation—Mornings, from 9 till 11; and Evenings, 6 till 9. Midwifery, from 10s. 6d. The Ashly-crescent Dispensary is open from 9 till 10 in the Morning, and from 6 till 8 in the Evening. Terms—Adults, 2s. 6d., and Children under Ten Years of Age, 1s. 6d. weekly, including Medicine and Prescriptions. Patients wishing to be visited are requested to send before eleven in the morning if possible."

COMMUNICATIONS have been received from—

The Ladies' Sanitary Association; Dr. W. Watson Campbell; Mr. R. Griffin; Dr. J. C. Thorowgood; Obstetrical Society of London; Dr. Wollaston; A Constant Reader; Mr. John Lewis; Dr. R. Dundas Thomson; Dr. T. Downie; Mr. R. W. Dunn; Dr. W. Burke Ryan; Pharmaceutical Society; Mr. Robert W. Dunn; Dr. R. S. Sisson; Professor Rymer Jones; Mr. A. M. Edwards; Dr. Tilbury Fox; Dr. J. W. M. Miller; Mr. R. B. Carter.

BOOKS RECEIVED.

Report of the Commissioners appointed to Inquire into the Sanitary State of the Army in India; with Précis of Evidence. London: Eyre and Spottiswoode. 1863.

*** This shall receive notice shortly.

How to Nurse the Sick. London: Jarrold and Sons.

*** This tract, or novelette, or story teaches that nurses need not fear fresh air, light, and flowers; that bedrooms ought to be clean, and without superfluous drapery; also that the invalid's eye should be amused; that whispering is odious; and a good deal else which might have been better said in smaller space, and without the machinery of a rather egotistical and vapid tale. As in most of such tracts, the country Doctors are described as nincompoops.

Copy of a Letter to Sir Fitzroy Kelly, M.P., Pointing out the Necessity that Cholera should be Studied Scientifically in India. By D. Macloughlin, M.D., Member of the Legion of Honour.

*** Dr. Macloughlin complains that the report of the Commissioners appointed to study the outbreak of cholera in 1861 is "like the tragedy of *Hamlet* with the part of Hamlet left out." He is of opinion that another commission should be appointed for the same purpose.

Edinburgh Medical Journal. July.

*** Contains two valuable and original papers,—one by Professor Laycock, "On the Causes and Nature of the Vascular Kind of Bronchocele, and of the Pulsation and Palpitation termed Anæmic." These are stated to be primarily due to a neurosis of the blood-vessels of the organs, and of spinal origin. The second is by Dr. Maclaurin, on the "Present State of our Knowledge of the Question of Muscular Irritability."

The Canada Lancet. W. E. Bowman, M.D., Editor. May, 1863.

*** Contains communications on Strychnia as a Poison, on the Arrest of Secretion of Milk, a leading article on Ovariotomy, notes on Chancres, and general Medical News.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 11, 1863.

BIRTHS.

Births of Boys, 989; Girls, 994; Total, 1983.
Average of 10 corresponding weeks, 1853-62, 1615·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	659	628	1287
Average of the ten years 1853–62	551·9	512·0	1063·9
Average corrected to increased population..	..	..	1170
Deaths of people above 90	..	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	19	7	11	3	2	4	20
North ..	618,210	13	3	27	1	8	11	22
Central ..	378,058	8	2	15	..	4	6	9
East	571,158	9	1	38	..	8	13	28
South ..	773,175	6	6	21	3	9	9	12
Total.. ..	2,803,989	55	19	112	7	31	43	91

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·093 in.
Mean temperature	65°
Highest point of thermometer	83·5
Lowest point of thermometer	51·1
Mean dew-point temperature	54·7
General direction of wind	N.E.
Whole amount of rain in the week	0·00 in.

APPOINTMENTS FOR THE WEEK.

July 18. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

20. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

21. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

22. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

23. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

24. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

A LECTURE
ON
DEFORMITY CONSEQUENT ON INJURY OR DISEASE—THE EFFECTS OF SHOCK—DISLOCATION OF THE ASTRAGALUS.

DELIVERED AT
St. Thomas's Hospital,

By FREDERICK LE GROS CLARK, F.R.C.S.,
Surgeon to the Hospital.

Gentlemen,—The cases (a) which I wish to bring under your notice to-day I will class under three heads; and, first, I will briefly direct your attention to some instances of deformity, resulting from injury and disease, or accidentally co-existing with them, which might mislead you into a serious error in diagnosis.

Case 1.—R. P., a married woman, aged 33, was admitted on April 28, 1863. She has suffered from numbness and shooting pain in the shoulder for twelve months, and during the six weeks previous to her admission was an out-patient at the Hospital. A large abscess was found occupying the pectoral region, and extending in front of the shoulder; fluctuation could not be detected in the axilla. On viewing the shoulder from the front, its form was immediately suggestive of a dislocation of the head of the humerus into the axilla. The acromion stood out prominently; all rotundity was lost; and the finger could almost be placed in the glenoid cavity, the humerus having dropped considerably, and the deltoid being atrophied, and all power of movement being lost. A large quantity of fœtid pus was withdrawn through an opening over the pectoral muscle. The patient's condition has improved very slowly; and with that improvement the deformity of the shoulder has diminished.

Case 2.—J. C., aged 48, a blacksmith, was admitted on March 21, 1863, with an oblique fracture of the lower third of the tibia and the upper third of the fibula. There was nothing unusual in this injury, and the limb was placed on a long back splint, with the fractured extremities of the tibia accurately adjusted. A few days afterwards my attention was attracted by the position of the patella in relation to the foot, which indicated great inversion of the lower part of the limb, for the patella looked almost directly inwards. As the sound limb presented no similar deformity, I directed the attention of my dresser to the supposed displacement, and requested him to give it careful attention. As no improvement was perceptible at my next visit, and as the fracture presented no evidence of corresponding displacement, I was induced to make some further inquiries, which led to my ascertaining that the deformity in this, his right limb, was the consequence of the peculiar position in which he stood when he wielded the heavy sledge-hammer which he used at his work.

Case 3.—C. S., aged 43, a stout and muscular man, was admitted on April 23, 1863. He had been thrown from a cart, and pitched on his shoulder. There was much swelling from effusion and extravasation of blood. He had not the slightest power to raise the elbow from the side; and there was some hollowing over the head of the bone, giving decided prominence to the acromion process. Here there were indications which seemed to point to fracture of the neck of the humerus as a probable explanation of the symptoms. It is by direct violence that such an injury is usually produced, and the signs are deformity of the kind here present, accompanied, as in this instance, by passive mobility of the joint, but entire loss of self-control in lifting the arm. A careful examination was therefore made, but no fracture was detected. The depressed head of the bone could be felt rotating beneath the finger when the humerus was moved, and there was no crepitus or abnormal prominence in the axilla when the arm was raised; moreover, the deformity was obliterated when the bent elbow was simply raised; artificial support immediately restored the head of the bone to its normal position. The patient was kept recumbent for a few days, with the injured limb in a dish splint, and when the severe bruising and consequent swelling had somewhat subsided, he was allowed to get up, with the arm well supported by a sling, which included the elbow. The use of the arm was gradually restored, and at the end of three weeks the patient left the Hospital convalescent, though still complaining, as he had all along, of pain in the course of the musculo-spiral nerve, and still unable to raise the arm more than a short distance from the side; there was also some little depression remaining below the acromion.

The first and third of these cases exemplify what is often seen, luxation of the head of the humerus from muscular paralysis. For a proper understanding of this condition it is necessary I should remind you how much the shoulder-joint is dependent for its integrity on muscular action. With a loose and extensible capsule, and a shallow articular cavity, the constant relation of the adjoining surfaces of bone is due almost exclusively to the tonic action of the capsular muscles surrounding the joint; this may be readily demonstrated by experiment on the dead body. If these muscles are paralysed the weight of the arm is sufficient to produce separation between the head of the humerus and the glenoid cavity of the scapula by elongation of the capsule. Yet this is not really dislocation, as the two surfaces, though thus separated, are still opposite to each other. As the separation gradually increases, synovia is secreted in sufficient quantity to occupy the intermediate space. The cause of the paralysis in the two cases is different; in the patient suffering from abscess long disuse of the muscles occasioned this result; but in the case of injury, contusion of nerves—probably the articular and musculo-spiral—and consequent loss of innervation, was the efficient cause. I have frequently seen this condition endure for a long time after a comparatively trifling injury to the shoulder. You may, perhaps, remember two cases of this description which were under my care some months since, in which there was great pain in the shoulder, accompanied by loss of power in raising the arm. Both cases were relieved by the treatment which I have found most efficacious in these cases, when they have become chronic, viz., a blister, repeated if necessary, until the pain subsides, and the subsequent employment of electricity. This treatment was, for obvious reasons, not applicable in the cases I have narrated; and my reason for bringing them under your notice is to account for the deformity and to guard you against an incorrect diagnosis under similar circumstances. The second case belongs to another category, for it was a natural deformity, or rather one resulting from a preceding cause, and having nothing to do with the injury. I remember being once a good deal perplexed in a case of dislocation of the head of the humerus, which I reduced after the lapse of a considerable interval from the receipt of the injury. Though the head of the bone was clearly in its normal position as regards the glenoid cavity, there remained still a very marked deformity of the joint, the shoulder being much lower than the other, and flattened. On inquiry, I found this was due to the employment of the patient, which obliged him to carry heavy weights on the opposite shoulder, and had thus produced the contrast, which at first induced me to think that the reduction of the dislocation had not been effected.

The second class of cases to which I shall refer illustrate the effects of shock from injury, more or less severe.

Case 4.—J. D., aged 24, a labourer, was admitted on May 20, 1863. Whilst working on a railway, he lost his footing, and fell a distance of fifteen feet on to his side. He complained of pain in the shoulder and left side, and was in a state of collapse. On careful examination, no fracture was detected, and therefore attention was simply directed to the restoration of the circulation by rest and warmth. On the following day he had rallied from the shock, and was enabled to leave the Hospital convalescent two days after the injury.

Case 5.—R. C., aged 36, was admitted on May 22, the wheel of a light cart having passed over his abdomen. He was pallid, and a general coldness overspread his body; the expression of his countenance was anxious, and he complained of pain in the abdomen. There was no external wound, nor sign of fracture of the pelvic or any other bones. He was placed in bed, and warmly covered; a catheter was passed, and some limpid urine drawn off. On the following day reaction had taken place; he had passed water, and the bowels had acted. He complained of pain in the left hip and leg. Five days after admittance he became feverish, the pulse having risen, and his skin was hot and tongue furred; he complained also of his limbs aching. This febrile condition, consecutive on reaction, continued for some days, having very much the character of continued fever, but was subsequently followed by bronchitis, with cough and muco-purulent expectoration. The state of the lungs, as indicated by percussion and auscultation, rendered it probable that there was tubercular deposit, and he was therefore transferred to the care of one of the Physicians.

(a) Reported by Messrs. Iles and Siddall.

Case 6.—W. C., aged 55, a bricklayer, was admitted on May 21, 1863, having fallen about twenty feet from a ladder, across some iron railings, and on his left side. He was taken up in an insensible condition, and immediately brought to the Hospital. On admission he was in a state of collapse, but sensible; the skin was cold, and the pulse scarcely perceptible. He had bled, and was still bleeding, from a lacerated wound on the back of one thigh, where, apparently, one of the railing spikes had penetrated; the outer side of the same thigh was severely contused; three ribs on the left side were broken, and his right cheek and temple were bruised. His breathing was laborious and painful, and he complained of great tenderness over the abdomen; a double rupture of large size had been imperfectly supported by an ill-made truss. He stated that he had been tolerably temperate, but that he had frequently suffered from attacks of gout. He was placed in a warm bed, with a hot bottle to his feet, and a flannel bandage was applied around the chest; his wounds were dressed, and a catheter was passed. On the following day reaction had come on, and he complained of dyspnœa, with cough and pain in the chest, and much tenderness over the abdomen; face flushed; tongue coated; he had passed water, but the bowels had not been moved; the rupture was reducible. A mixture was ordered to relieve the cough, and light nutriment given. On the third day, his quick and feeble pulse, and general prostration, rendered it necessary to give a diffusible stimulant, in spite of his dyspnœa and pain in breathing and the continued abdominal tenderness. Bowels still unrelieved; it was necessary to pass a catheter; in fact, he seemed to be sinking. On the fourth day he had rallied, and on the fifth, as the abdomen was becoming tense, an injection was ordered, and to be followed, if necessary, with a warm aperient draught of rhubarb, senna, decoction of aloes, and ginger. This draught acted, and relieved the tension and tenderness of the belly, and during the three days which have since intervened, he has continued to improve, with the exception of suffering from his old enemy, the gout. He is still in a precarious condition, though I now have hope of his recovery. (Since this lecture was delivered this patient has continued to improve, and is now convalescent.)

Case 7.—F. G., a boy 6½ years old, was brought to the Hospital on May 25, having been run over by a wagon half-an-hour previously. When he reached the Hospital he was already dead. On examination of the body it was found that many ribs were broken and torn away from their vertebral attachments, the spleen was very much torn, the pancreas and both kidneys were ruptured and lacerated, as was also the liver slightly, and the stomach was likewise ruptured. There was a great deal of blood extravasated into the abdominal cavity.

The foregoing cases are simply typical of a class which are of frequent occurrence, especially in Hospital practice, and the fact of their having occurred in the short space of one week has induced me to select them for commentary. I have narrated them in such order as to form a consecutive series, illustrating the effects of shock on the system generally. In the first and simplest instance, the shock was soon recovered from, without any excessive reaction or consecutive mischief. Yet, even in this case it would have been unwise to give an early prognosis of so favourable a result. As I have often reminded you, a state of collapse from severe shock alone, does not differ essentially from that which is associated with some fatal visceral lesion. Your treatment must be expectant, attention being simply directed to the restoration of the circulation by warmth, and, if requisite, the cautious use of cordials. The second case was similar to the first, for there was no organic lesion, but the shock was greater and the reaction proportionate. At first I attributed the continued febrile excitement to the same cause, regarding it as a morbid prolongation — if I may so express it — of the reaction. But the subsequent condition of the patient seemed to indicate that it was associated with, or promoted by, some pre-existing disease of lung, which had been thus called into activity by this roused condition of the vascular system. In the third case the injury was more severe and complicated, and I was apprehensive that some abdominal lesion also existed, from the great and continued tenderness of the abdomen,—a suspicion which influenced me in refraining from giving aperient medicine until some days had elapsed. There was no emphysema, and therefore we had no positive proof of wound of the lung. The loss of blood he had sustained was not sufficient to account for his profound collapse; it was evidently caused by the shock of a severe fall, and the complicated injury consequent thereon. The treatment was directed to the symptoms as they arose, and that is all that could or can be done; whether he will recover is a problem still to be solved. The last case narrated is a climax of the series, and as such only is it worth noting. We do not know how long the poor child lived after he received the injury; no doubt the shock of the hurt produced instantaneous collapse, and probably life oozed imperceptibly away with the loss of blood, which was found extravasated into the abdomen. Food was also found, partially digested, in the cavity, proving that a meal had been recently taken. Cases of ruptured viscus are not infrequent, but it rarely happens that we have the opportunity of witnessing the lesion of so many organs in one case. I believe you will find that laceration or rupture of a membranous viscus is far more uniformly fatal than that of a solid one like the liver or spleen. Prostration may destroy life in either case, but from different causes apparently. Profuse hæmorrhage may follow the rupture of a solid viscus, and thus prove fatal, but the collapse consequent on the rupture of a membranous viscus is dependent on the irreparable nature of the injury in most instances; and the inflammation consequent on the extravasation of the visceral contents is frequently, if not generally, of a type different from simple acute peritonitis, more depressing, and rapidly fatal in its character. Probably the glandular viscera are the seat of lesion in some instances, without our having any positive proof that such is the case; and this may have happened in the third of the foregoing cases, and be the explanation of the abdominal symptoms.

The following two cases of dislocation of the astragalus, which occurred during my last week of taking in, present features of considerable, and one of them of peculiar, interest. I will narrate them to you before making some remarks on them, and on this injury generally:—

Case 8.—W. R. B., aged 28, a hotel-keeper, was admitted on May 20, 1863. Whilst driving a dog-cart to the Epsom races, his horse took fright, and he was thrown out with violence, and dragged for some distance by the reins, his foot having become entangled, as a policeman described, in the iron step of the vehicle. He was immediately brought to the Hospital, suffering great pain in the right or injured foot. On first sight the deformity was not very marked; there was neither eversion nor inversion of the foot, nor elongation or shortening of the tarsus; the tendo-Achillis was not tense, but the interval between the inner malleolus and tuberosity of the os calcis was occupied by a hard prominence, over which the skin was stretched, and which proved to be the astragalus. There was very little surrounding effusion, and therefore the outline of the bone could be easily traced. The fibula was broken above the ankle, but the inner malleolus was not fractured. The tibial surface of the astragalus was superficial, looking inwards and a little upwards; the sharp margins of this surface, and the malleolar articulations beyond, could be distinctly felt. The posterior extremity of the bone was directed downwards and a little forwards; and the finger could trace the tibial surface, or trochlea of the bone, as far as the depression between it and the head. This, the neck of the astragalus, was driven behind the inner malleolus, and therefore its head or navicular portion must have been lodged behind and internal to this prominence, and beneath the base of the tibia. The dislocated bone was thus wrenched from all of its connexions, rotated on its axis, and thrown inwards, so that its anterior part was directed upwards and backwards, and its upper surface faced inwards. The skin over it was tense; the circulation through the posterior tibial artery was stopped, and the foot was numbed, for both vessels and nerves were stretched over the convexity of the displaced bone. A fruitless attempt was made, under chloroform, to reduce the dislocation, by extension and pressure; scarcely any perceptible effect was produced; and the same result followed a similar attempt when the extension was kept up by pulleys, and an endeavour was again made to force the bone back into its position. The limb was then placed on an outside splint, and a cold lotion applied over the ankle;

an anodyne was ordered at bedtime. On the following day the swelling had considerably increased, so that the position of the bone was no longer so accurately defined; but the patient was comfortable. In the course of a few days the tension of the skin had considerably diminished, and with it the fear that ulceration would occur; but a week elapsed before the sole of the foot began to recover natural sensation. At the same time feeble pulsation in the posterior tibial artery became perceptible. The limb was kept on the outside splint until June 12, which was about three weeks from the occurrence of the accident. At that time the sensibility of the sole of the foot was still very imperfect. The skin was no longer tense, and looked healthy over the displaced bone, the outline of which had again become distinct, from the subsidence of the swelling. The patient suffered very little pain or tenderness, and there was a tolerable amount of motion at the joint, and passive motion occasioned no pain. The foot and leg were now encased in gutta percha, and the patient was allowed some liberty with crutches. (This patient is now able to walk with a stick. The motion at the new joint is limited, and the weight is thrown principally on the outer border of the sole.)

Case 9.—Mr. J. G., aged 51, a bookbinder, of muscular build, was admitted into the Hospital on May 25, 1863. Whilst stepping from an omnibus, his right foot slipped, his left being on the last step. The consequence was that the former came violently to the ground in an inverted position. He attempted to walk, but soon fell, observing that he trod on the outside of the foot, though he at first experienced no pain. When his boot was cut away, the following appearances presented themselves:—The foot was inverted, so that the sole looked inwards, the deformity in this respect resembling talipes varus; the tendo-Achillis was tense; the astragalus was driven obliquely forwards, so that one-third of its tibial surface was exposed; the outer malleolar articulation was entirely dislocated, but the inner retained its position. On the upper part of the tarsus the skin was stretched tightly over a hard, rounded prominence, which was the disarticulated head of the astragalus. No fracture of either tibia or fibula could be detected. Extension without chloroform proving unavailing, the patient was put under its influence. The foot was then grasped firmly by the tarsus and heel, in the way in which a bootmaker draws off a tight boot, and the ankle-joint being everted and extended, whilst extension was kept up on the tarsus and heel, the tibial dislocation was first reduced. The heel being then still drawn down with the right hand, pressure with the left on the back of the tarsus soon accomplished the further reduction of the head of the astragalus. The limb was then confined in a back splint, with a foot piece. There was subsequently a good deal of effusion at and above the ankle-joint, otherwise this patient had no bad symptom. The foot was kept at rest in the splint for three weeks, and was then encased for a short time longer in gutta percha, when he left the Hospital with perfect motion of the ankle-joint. He was enjoined to use the limb cautiously with crutches until its strength was restored. (He is now well.)

Dislocation of the astragalus, though not a very rare accident, is by no means a common one. I have seen several instances, some simple, others compound, or complicated with fracture. In contemplating the relations and connexions of this important bone, one would scarcely have anticipated the probability of its complete dislocation from any amount of violence, however applied. The two cases I have described to you, and which you have witnessed, are types of the two different forms of dislocation which may occur. I do not make this remark in reference to the direction in which the dislocated bone is thrown; for I have never seen a case similar to the first described, and I am disposed to think it is unique, as I can find no record of a parallel displacement. But I refer to those cases in which, on the one hand, the astragalus alone is severed from all its relations, and entirely ejected from its position; and those, on the other, in which the astragalus retains its connexion with the os calcis, or with tibia and fibula, undisturbed, and in which the injury may be regarded rather as a dislocation of other bones from the astragalus. This is not a fanciful distinction, but one, I think, of practical interest; for, as a rule, the former cases do not admit of reduction, whereas the latter do. In accordance with this view, I should describe the second case as one of partial dislocation of the tibia backwards, accompanied by dislocation of the scaphoid bone downwards, carrying with it the anterior part of the tarsus. This form of accident is, moreover, produced in a different way from that of simple dislocation of the astragalus; in the former the foot is twisted out of position, in the latter the dislocated bone is usually jammed out of its place by great violence, as in jumping or falling on the feet from a height. Again, the deformity and the obstacles to reduction are different in degree and character in the two classes of cases. Where the astragalus retains its relation with the os calcis, the distortion is of the foot, in part or altogether, and is dependent, in a measure at least, on muscular spasm; whereas, in complete luxation of the astragalus, the deformity is due solely to the abnormal projection of the bone in its new position. The obstacles to reduction correspondingly differ; in the former class, if the resistance of the muscles can be overcome, the reduction usually follows; but, in the latter, the muscular tension is not great; indeed, the chief resisting agent, the gastrocnemius, is, for an obvious reason, relaxed, and the true source of obstruction is that the cube-shaped bone which is displaced cannot be forced back into the narrow space from which it has been extruded with great violence; the neighbouring bones collapse, if I may so express it, and no force which can be applied suffices to separate them far enough to re-admit their ejected companion.

The most usual direction in which the astragalus is dislocated, when it has broken from all its connexions, is forwards; but some interesting cases have been recorded in which it was forced backwards. In the former accident, the displaced bone rests in front of the tibia on the anterior part of the tarsus, where it forms a prominent projection, and not infrequently bursts through the skin; in the latter, the bone rests behind the tibia, that is, between it and the tendo-Achillis, and of course above the heel-bone: such is the description given by those who have witnessed this accident, which I have not. The mode in which the singular dislocation occurred, in the former of the two cases which I have narrated, is, unfortunately, not positively known; whether his foot came violently to the ground, or was caught and twisted by the step of the carriage, the patient does not know. I am inclined to think the former more probable. I saw him very speedily after the occurrence of the accident, and was able to define and demonstrate the position of the dislocated bone, which was certainly very remarkable; for, not only was it completely forced out of its position, but also rotated so that its front part looked upwards and backwards. The cessation of pulsation in the posterior tibial artery, and the numbness of the foot, were the natural consequence of the tension of the posterior tibial vessels and nerves. The question of tenotomy was not to be entertained in this case, for the tendo-Achillis was quite lax, and was not made tense even by extension of the foot. Before I made any effort at reduction, I anticipated it would prove fruitless; the chief fear I had was, that the skin might subsequently give way where it was so much stretched, but happily this did not happen, and it is surprising to see how satisfactorily the soft parts have accommodated themselves to their new relations. Whether the isolated position of the bone might affect its vitality was also a problem to be solved; but I see no reason now to apprehend any ill consequence from this cause. I anticipate that the patient will have a useful foot, with limited mobility at the new ankle-joint, and with comparatively trifling deformity; for the axis and position of the foot, in its relation to the leg, is perfectly natural, and the rounded prominence, in place of a depression between the tibia and tuberosity of the heel-bone, is the only deformity.

The second case presents many points of striking contrast with the first, and illustrative of the remarks I have already made. The distortion from displacement was greatly aggravated by muscular spasm, so much so, indeed, that I had a tenotomy knife at hand to divide the tendo-Achillis if I found it necessary; but the aid of chloroform being called in, this was not required. Prolonged rest was needed to allow the inflammation to subside, and also to permit separation of the injured joints; there is no reason to doubt that the recovery will be complete.

Should any operation beyond tenotomy be performed to reduce a dislocated astragalus? If the dislocation be compound, and the division of some obstructing band of ligament or of the skin would aid in reducing it, there could be no objection to such a proceeding; but I think it very questionable whether any circumstances could justify cutting down upon a dislocated astragalus for the purpose of attempting its reduction, unless, indeed, the alternative of removing it in case of failure be contemplated. Where the dislocation is compound, and attended by much laceration, the immediate removal of the bone is the best course to adopt; and such cases have done well, and a useful foot has been preserved. If there is no wound of the integument, and reduction cannot be effected, it is better to await the issue, and act accordingly. The tension of the skin may produce sloughing, and then, at a later period, the same operation may be resorted to with a similar prospect of success; but, as in my first case, by patience and careful management this may be averted. It would be an awkward position to have been compelled to remove the bone in the case referred to; for it would have most probably involved the necessity of dividing the tibial vessels and nerves to accomplish its successful extrication from its singular position.

LECTURES
ON
ECZEMA,
(INCLUDING ITS IMPETIGINOUS, LICHENOUS, AND PRURIGINOUS VARIETIES,)
DELIVERED AT THE
Dispensary for Skin Diseases, Glasgow.

By T. McCALL ANDERSON, M.D., F.F.P.S.
Physician to the Dispensary for Skin Diseases; Physician to the Deaf and Dumb Institution, etc., Glasgow.

Lecture V. (a)

Gentlemen,—From the treatment of eczematous eruptions occurring in limited patches, I pass naturally to the consideration of the last division of the subject, the

Local Varieties of Eczema, and I trust you will bear in mind that the remarks I am about to make are to be taken in connexion with what I have already said, as much needless repetition may thus be avoided.

While eczema may be observed upon any part of the cutaneous envelope, and indeed may affect almost the whole of it at one time, there are certain localities which it seizes upon in preference to others, and to which it is often limited These are the head, hairy portions of the face, lips, edges of the eyelids, nostrils, external auditory passages and ears, hands, feet, legs, genitals, anus, umbilicus, and those parts of the skin which are naturally in contact with one another.

Eczema of the Head (eczema capitis, impetigo capitis) occurs most frequently in the pustular form, especially in the case of children, whose heads are attacked with remarkable frequency. When this part is affected, the eruption has a tendency to chronicity, particularly if the treatment is not energetically and thoroughly carried into effect. For it is more difficult to keep the surface clean than when the non-hairy parts are invaded, owing to the hairs being glued together by the exudation, and to the crusts being entangled in them and difficult of removal. For this reason the patient often allows them to remain for weeks, months, nay, even years upon the head, and, when advice is at last obtained, the whole scalp is not unfrequently found to be concealed from view. In this way, collections of pus are often formed between the crusts and the scalp, owing to confinement of successive exudations, which do infinite harm. Besides, when hard crusts are allowed to remain on the head for a lengthened period of time, they press upon the hair follicles, and lead to their obliteration, whereas, when the eruption is properly treated from the first, there should be no permanent loss of hair. When the disease is neglected in the manner just indicated, the exudation becomes decomposed, lice are attracted to the part, and are often detected, wallowing in the mire, in thousands, while their nits (eggs) adhere, by means of sheaths, with great tenacity to the hairs, and in countless numbers. But while lice often occur as complications of an eczematous eruption, you must be alive to the fact that these insects sometimes attack the head of a healthy person, in whom they excite a sensation of itching. This causes the patient to scratch the head, and an eczematous eruption may thereby be induced. The lice on the head are thus the exciting cause of eczema in some cases, its result in others.

Little subcutaneous abscesses are often met with on the head in addition to the collections of matter between the scalp and the crusts, and enlargement of the neighbouring glands, especially those on the back of the neck and over the mastoid processes, occur in all aggravated chronic cases. These enlargements are due to the irritation set up by the adjacent eruption, and must on no account be looked upon as indicative of a strumous taint, though of course a smaller amount of irritation is capable of causing their enlargement in scrofulous children.

The *diagnosis* of eczema capitis is sometimes difficult to the unaccustomed eye, and I have accordingly arranged in a tabular form the points to be attended to as distinguishing it from syphilitic eczema capitis, seborrhœa capitis, psoriasis capitis, and herpes tonsurans.

Table showing the Points which distinguish Eczema Capitis from Syphilitic Eczema Capitis, Seborrhœa Capitis, Psoriasis Capitis, and Herpes Tonsurans:—

Eczema Capitis.	Syphilitic Eczema Capitis.
(1.) Occurs oftenest in children.	(1.) Occurs usually in adults.
(2.) Often attacks the whole scalp.	(2.) Usually occurs in small patches.
(3.) Exhibits superficial ulcers only.	(3.) Exhibits deep ulcers, with perpendicular edges and unhealthy bases.
(4.) Occurs in persons in whom there is no history of primary syphilis, except as a coincidence.	(4.) Occurs in persons in whom there is a history of primary syphilis.
(5.) Does not occur in connexion with symptoms of syphilis, except as a coincidence.	(5.) Occurs in connexion with other signs of syphilis, *e.g.*, alopecia, sore-throat, other syphilitic eruptions on the skin, glandular enlargements, rheumatic pains, etc.

For further particulars, see the general diagnosis of eczema from syphilitic eruptions.

Eczema Capitis.	Seborrhœa Capitis.
(1.) Exhibits crusts, which are brittle, are often very thick, and are composed of pus, granular matter, and epithelium.	(1.) Exhibits crusts, which can be kneaded into a ball, are usually thin, have an oily feel, and are composed principally of sebaceous matter and epithelium.
(2.) Is excessively itchy, and, after removing the crusts, the scalp is infiltrated, red, often excoriated, and exudes serum or pus.	(2.) Is not excessively itchy, and, after removing the crusts, the scalp is not infiltrated, red, or excoriated, exudes neither serum or pus, but is smooth and oily.

Eczema Capitis.	Psoriasis Capitis.
(1.) Occurs oftenest in those whose health is deteriorated, or who are scrofulous.	(1.) Occurs oftenest in those who are apparently in perfect health, and rarely, if ever, in those who are scrofulous.
(2.) Is usually very itchy.	(2.) Is usually not very itchy.
(3.) Exhibits exudation on the surface of the skin.	(3.) Is a perfectly dry eruption.
(4.) Exhibits thick yellowish, usually moist crusts.	(4.) Exhibits usually thin, white, dry scales.
(5.) Occurs often in connexion with eczema of other parts, as of the ears, etc.	(5.) Occurs almost invariably in connexion with psoriasis of other parts, especially of elbows and knees, where the diagnosis is easy.

Eczema Capitis.	Herpes Tonsurans (Ringworm of the Head).
(1.) Patches not circular unless the hair has been cut short in a circular manner with scissors.	(1.) Patches circular.
(2.) Hairs healthy (though they may fall out here and there), and exhibit no parasite.	(2.) Hairs brittle, twisted, broken off close to the scalp, loaded with the parasite (tricophyton tonsurans).
(3.) Itching usually excessive.	(3.) Itching not usually severe.
(4.) Eczematous eruptions often on other parts of the body.	(4.) Herpes circinatus (ringworm of the body) often on the body.

(a) These Lectures have been carefully revised, and many alterations and additions made.

(5.) Not contagious.	(5.) Contagious, especially to children, and often other members of the family exhibit ringworm of the head or body.

But cases are often met with in which ringworm of the head is complicated with eczema of the head. The eczematous eruption is then the more prominent of the two, and the ringworm is often overlooked. In these cases the diagnosis is arrived at by detecting some of the brittle, broken, or twisted hairs loaded with the parasite. It is therefore well, in every case of eczema, to examine the hairs carefully, with the eye at least. The history of the case, the way the eruption commenced (in circular dry patches), and the signs of the contagious nature of ringworm, assist the diagnosis. The following case is a good example of the complication of ringworm of the head with eczema:—

Richard R., aged 8, was admitted at the Dispensary for Skin Diseases, November 25, 1861. Almost the whole of his head was covered with thick, yellowish, eczematous crusts, and the backs of his ears were infiltrated, exuding, and itching. Little patches of alopecia existed on the scalp, and, on examining the head attentively, little fragments of hairs were detected here and there, which were brittle, broke on attempting to extract them entire, and were loaded with the spores of the tricophyton tonsurans. The disease commenced as a small circular patch on the crown of the head, having, according to the statements of the mother of the patient, all the characters of ringworm.

Mr. Jabez Hogg, who professes to find parasitic growths in all skin diseases, would probably have made use of this case in support of his views, had it come under his observation, whereas a careful examination, and an inquiry in the history of the case, showed it to be a case of ringworm, complicated, in its later stages, with eczema.

Alopecia areata (circular patches) of baldness ought never to be mistaken for eczema of the head, and the disease only requires to be kept in view in order to prevent an error in diagnosis. *Favus* is, however, often difficult of distinction from eczema capitis. In cases of favus "where the head is more or less covered with an eruption exhaling the odour of mice, and consisting of bright yellow, dry crusts, depressed in the centre, through the middle of each of which one or more hairs pass, which have a dull, dry appearance, and are more easily extracted than natural, the diagnosis is very easy, and those who have seen the disease once can never mistake it. When it has continued for a length of time, when the crusts have lost their cup-shaped form and their bright yellow colour, and have become entangled in the hair; when, in fact, we have to do with the variety described as favus squarrosa, it may be—and often is—mistaken for impetigo of the scalp. But in the former there are generally patches of alopecia which are wanting in the latter. In it certainly the hairs often fall out, although only here and there, and not in patches as in favus. The alopecia of favus is permanent, that of impetigo generally temporary. There is also no alteration of the hairs in the latter; in the former they are dull, dry, discoloured, and easily extracted. Attention to these points generally serves to clear up the diagnosis; but, if doubt still exists, it may at once be removed by the microscopic examination of the crusts. There is one point, however, which requires to be borne in mind, namely, that the discovery of some pustules does not prove that the disease is impetigo, as pustules are frequently developed in cases of favus from the irritation of the parasite. And also one should not lay too great stress on the value, in a diagnostic point of view, of the odour exhaled from the eruption, as this symptom is not so pathognomic as some dermatologists would have us to suppose.

"Very often the diagnosis is rendered difficult on account of a propensity of parents to clean carefully, and remove all the crusts from the head before bringing their children for advice. There is then to be seen redness of the scalp combined with the presence of a few pustules, the results of irritation, and here again the disease resembles impetigo. But if it is a case of favus which we have before us, the deep red, depressed, distinctly circumscribed surface, covered by a thin, shining epidermis, is quite different from the light-coloured, diffused redness of impetigo. If this is not sufficient, the hairs should be examined, when they will be found to be altered, and the parasite is detected in them with the microscope. If this is not satisfactory, do not give an opinion, or resort to any treatment, but desire the patient to return in a couple of weeks, leaving the head untouched in the *interim*, after which time the disease will have had time to re-develope itself, and its nature is at once discovered." (b)

In the *treatment* of eczema of the head, the removal of the crusts is often difficult, and the remedial applications cannot be so thoroughly applied to the diseased surface. If the eruption is at all extensive or severe, and if it occurs in children, I am in the habit of ordering the hair to be cut as short as possible, and I always insist upon this, if, as happens too often, particularly amongst the poor, the disease is complicated with lice. The crusts can then be separated with greater facility, and the morbid surface more fully exposed to view. In adults, and especially in females, the removal of the hair must often be dispensed with, and the cure is consequently much retarded.

It is only in chronic cases, occurring in adults, and rebellious to milder treatment, that shaving of the head, and the application of iodine and blisters (see Lecture IV.), is to be recommended; for, in the ordinary run of cases, the milder treatment, before fully discussed, is usually effectual. In very obstinate chronic cases, which resist both internal and external remedies, although very few indeed do not yield to blisters, epilation may be tried, though this is rarely necessary. (c) If epilation is recommended, and you must remember that it is only to be carried into effect as a "*dernier ressort*," you should at the same time use a lotion of bichloride of mercury, or one of the mercurial ointments previously referred to. (See Lecture IV.)

Eczema of the Hairy Portions of the Face (Eczema pilare faciei), is an exceedingly common, and a very annoying affection, owing to the disfigurement which it occasions, the burning heat which accompanies it, and the difficulty and pain of shaving. The only word in English dermatological works which is intended to denote it is "impetigo menti," but the disease is by no means confined to the chin, so that this name is a too restricted one. I have therefore called it "Eczema pilare faciei" which is more correct, though perhaps not so euphonious.

The eruption commences by the formation of pustules, each of which is situated at the orifice of a hair follicle; for you will notice that a hair passes through the centre of each pustule. It is curious, though true, that eczema almost always assumes the pustular form in this situation in adult males—an observation which coincides with what I told you before, that the pustular form of eczema (impetigo) is much more frequently observed on hairy parts of the body.

These pustules dry up into small yellow crusts, which are difficult of removal, owing to their adhesion to the hairs as well as to the skin. When many pustules form at the orifices of neighbouring follicles, they have a tendency to run together, and, on drying up, large irregular yellow crusts are left. If these are not removed, successive exudations on the surface of the skin are confined by them, and lead to excoriations, and, owing to their continued pressure, to obliteration of the hair follicles, and permanent alopecia of the affected parts. The skin on which the pustules are developed assumes a dusky red tint, and becomes gradually more and more thickened and infiltrated. The patient sometimes complains of itching, oftener of pain, or burning heat—a sensation which is principally experienced during the formation of a crop of pustules. The disease is often kept up for months or even years, owing to the occurrence of successive crops of pustules.

The causes which specially operate in the production of this form of eczema are, irritating discharges from the nose and mouth, and the irritation of the razor, especially when that instrument is blunt. Indeed, the disease not unfrequently disappears spontaneously when these causes are no longer in operation, unless the predisposition to eczema is very strong, or the eruption has lasted a long time.

The diseases with which it may be confounded are acne sycosiformis and sycosis parasitica. In *acne sycosiformis* the eruption partakes more of the tubercular than of the pustular form, and the eruption of acne is detected on the non-hairy parts of the face, and often also between the shoulders and on the front of the chest. Indeed, acne sycosiformis (so-named from the resemblance of the eruption to sycosis parasitica) is merely acne indurata implicating the hairy instead of the non-hairy parts of the face. Strictly speaking, the form of eczema at present under consideration has nearly as much right to be ranked with acne as with eczema, in which case acne sycosiformis would be regarded as an advanced stage of eczema of the hairy parts of the face. The treatment of the two affections is nearly the same, so that it is unnecessary to insist further upon the diagnosis.

(b) "The Parasitic Affections of the Skin," by T. McCall Anderson, M.D. London: Churchill and Sons. 1861.

(c) For the mode of extracting the hairs, see my work on the "Parasitic Affections of the Skin," p. 34. London: Churchill and Sons. 1861.

The disease which is oftenest confounded with this form of eczema is sycosis parasitica, although the differences are generally very marked. These are well shown in the following table:—

ECZEMA PILARIS FACIEI.	SYCOSIS PARASITICA (Ringworm of the Beard).
(1.) Very common in this country.	(1.) Very rare in this country.
(2.) A pustular disease only.	(2.) Pustules, tubercles, and large fleshy indurations detected when disease fully established.
(3.) No trace of herpes circinatus either on the affected parts or in other localities.	(3.) Rings of herpes circinatus (ringworm of body) detected amongst the hairs, and often round the front of the neck, or on the wrists, arms, or other parts of the body.
(4.) Not contagious.	(4.) Contagious, and often history of contagion.
(5.) Hairs healthy, and adhere firmly, so that epilation causes pain unless much suppuration has occurred at their roots.	(5.) Hairs brittle, broken, and twisted; have lost their natural glistening appearance, and can be extracted with perfect ease and without pain.
(6.) No parasite to be detected.	(6.) Fungus (tricophyton tonsurans) detected in the hairs and scales.

In the cure of this form of eczema, if the means already indicated fail, the patient should be directed to stop shaving, or, if he has a beard, the hair should be cut short. All the hairs proceeding from the affected parts should then be extracted, after which a stimulating and alterative ointment, such as citrine ointment, should be rubbed firmly over the morbid surface night and morning. This treatment often acts like a charm, and I have cured many old standing cases in a couple of weeks by means of it. While it sometimes fails to effect a complete cure, it is always, as far as my experience goes, productive of temporary benefit. After the parts have been once epilated, if new pustules appear, the hair passing through the middle of each must at once be extracted, and the use of the ointment continued.

The following case, and I could cite many such, illustrates the benefit of this mode of treatment. I have selected it because it shows the value of epilation as compared with other treatment:—

Mr. M., aged about 35, consulted me on April 24, 1861, with regard to an eruption on the upper lip, immediately beneath the nostrils. The patch was about an inch square, the skin red and infiltrated, and numerous pustules and yellow crusts were situated at the orifices of the hair follicles. The disease was kept up by the formation of successive crops of pustules. He stated that he had frequently discharge from the nostrils, which he thought irritated the skin of the upper lip. He had been taking Donovan's solution for some time when I saw him, and he said with benefit, and it was therefore continued.

A week afterwards, the eruption being in no way altered, Fowler's solution, at first in ten, later in fifteen-drop doses (thrice daily), was administered for some weeks, and an ointment of two drachms of citrine ointment, mixed with six of linimentum calcis, was rubbed firmly into the roots of the hairs night and morning. The arsenic, in one form or another, having been continued for a couple of months, and pushed till it produced derangement of the digestion, and no benefit accruing from its employment, was omitted, and the morbid surface was touched gently with solid potassa fusa after the removal of the crusts.

A week afterwards (May 21, 1861), great improvement was observed. The infiltration and redness of the skin were much less, but still a few pustules continued to form at the edges of the patch.

I now lost sight of the patient till January 23, 1862, when I found the eruption pretty much in the same state as when I first saw him, it having never disappeared entirely. I at once removed the crusts, extracted all the hairs, and ordered citrine ointment to be used night and morning.

Four days later (January 27, 1862), the infiltration and redness of the skin were nearly gone, and no new pustules had appeared. He was ordered to continue the use of the ointment a little longer, and, if any new pustules appeared, to pull out the hairs which proceeded through the centres of them.

About two months after this (March 21), I saw this gentleman by accident, when he informed me that, since the epilation, the disease had never reappeared, and I could discover no trace of the previous eruption. He wore a magnificent moustache,—epilation, as most of you are aware, having the effect of making the hair grow more luxuriantly than ever, owing to the stimulus which that operation gives to the circulation of the part.

Those of you who are alive to the benefits of a luxurious pair of whiskers, and who have not yet succeeded in the attainment of your wishes, may perhaps be inclined to draw a practical lesson from the results of epilation in the case of the gentleman just alluded to.

Eczema of the Lips (eczema labiorum) is by no means of rare occurrence, and may coincide with a similar eruption on other parts, though the former are often affected alone. The eruption may be confined to one lip, or both may be implicated, and they may be the seat of any of the forms of eczema previously described. They are often greatly swelled, the serum being diffused through the cellular tissue, the meshes of which are very loose. The oral aperture is often spasmodically contracted, especially if fissures complicate the eruption, as they often do, particularly at the angles of the mouth and the centre of the lower lip.

Hebra has observed eczema of the lips to be frequently associated with eczema of the anus, and he once had a patient who was affected alternately with eczema of the anus and lips.

The two diseases which are most apt to be mistaken for eczema of the lips are herpes labialis and syphilitic eruptions on these parts. But you will be little likely to fall into error if you remember the points to which I referred in speaking of the diagnosis of eczema in general. (See Lecture II.) There is just one additional circumstance, however, with which you should be familiar in connection with syphilitic affections of the lips, namely, that the eruption rarely affects the whole of even one lip, but has a marked tendency to concentrate itself at the angles of the mouth, where it is often obstinate till the patient is brought under the influence of mercury, when it, "vanquished, quits the field."

You must be careful in the use of strong solutions of poisonous preparations, such as those of corrosive sublimate, in the treatment of this affection, for it is quite possible for the patient to swallow a sufficiency of the mixture to induce serious symptoms. I have nothing to add with regard to treatment further than to refer you particularly to my remarks upon the means adopted for the removal of limited eczematous eruptions.

The following case of eczema of the lips is a good illustration of the eruption in question.

"A gentleman, aged about 35, consulted me on April 15, 1861, about an eruption of eczema attacking both lips, and for the second time. A small infiltrated exuding and itching patch existed on the right cheek, near the angle of the mouth, and occasionally vesicles were detected on it. The lips were slightly infiltrated, thickened, red, and itching; the epithelium was constantly peeling off them, so that they were very rough, and sometimes a little serous fluid exuded, while fissures had formed here and there, but particularly at the angles of the mouth. His general health was excellent. Fowler's and Donovan's solutions were successively administered without effect, and the disease was finally and rapidly cured by applying "aqua potassa" to the parts night and morning, and washing them frequently with cold water."

Eczema of the edges of the Eyelids (*Eczema tarsi, Ophthalmia tarsi, Tinea ciliorum*) is exceedingly common, especially in scrofulous children, and in them often associated with conjunctivitis and strumous ophthalmia. The affection is neither more nor less than a pustular eczema (impetigo), attacking the edges of the lids, although it does not seem to be generally recognised as such by ophthalmic Surgeons; for it commences by the formation of pustules at the orifices of the hair-follicles, which concrete into scabs, beneath which small ulcers are detected, and, when the disease is fully developed, the usual symptoms of eczema, itching, infiltration, exudation, etc., are observed. The exudation from the morbid surface, mingled with the altered secretion from the Meibomian follicles, glues the edges of the eyelids together, especially at night, unless proper precautions are taken. Lachrymation is likewise a common symptom, and the tears, falling on the cheek, not unfrequently irritate the skin, and give rise to an eczematous eruption.

If improperly treated or neglected, as occurs too often, the pressure of the crusts, the confinement of the discharge, and the formation and extension of ulcers, lead ultimately to obliteration of the Meibomian glands and hair-follicles, after which a perfect cure is of course impossible. Amongst the train of evils may also be mentioned eversion or inversion of the lids, and, if the eyelashes are not gone, owing to obliteration of their follicles, the hairs are apt to assume abnormal directions.

With regard to the local treatment (for the constitutional, see the treatment of eczema generally), the extraction of the eyelashes is always followed by improvement. This operation is far too often omitted, for, in my opinion, it should be uniformly carried into effect in bad cases, and repeated if new pustules form at the orifices of the follicles exactly in the same way as in the treatment of eczema of the hairy parts of the face. (See treatment of eczema of hairy portions of face.) In addition to this, if the parts are much infiltrated, I am in the habit, after the removal of all crusts, of applying a solution of potassa fusa (usually a solution of ten grains in an ounce of water) to the edges of the lids, an operation which should not be entrusted to the patient, at first at all events. A small brush must be used, and very little of the solution taken up by it, so as to make it moist, but no more. The eyelid must then be carefully dried, else the application spreads, everted so as to remove it from the eyeball, and the solution painted along its edge. A large brush soaked in cold water should be in readiness to stop the action when desired. This application may be repeated every day till the infiltration, exudation, and itching subside, after which citrine ointment may be relied upon for completing the cure. In slight cases you will often find the eruption yield to the use of citrine ointment alone, coupled with cleanliness. During the treatment of eczema tarsi a little ointment (diluted citrine ointment, for example) should be applied to the edges of the lids at night, so as to prevent their adhesion, but it must always be washed off in the morning. If, notwithstanding the anointing of the lids at night, they are adherent in the morning, you must on no account tear them asunder, but must previously soften the agglutinated matter. Towards this end you cannot go wrong if you follow the instructions of Mackenzie. "A teaspoonful of milk, with a bit of fresh butter melted in it, may be employed for smearing the lids, rubbing it with the finger gently along the agglutinated eyelashes. A piece of soft sponge, wrung out of hot water, is then to be held upon the eyelids for some minutes, after which the patient will find the eyelids yield without pain to the least effort he makes to open them. With the finger-nail the whole of the matter is immediately to be removed." (d)

If there is any inflammation of the conjunctiva, Mackenzie's excellent wash of the bichloride of mercury (e) may be used with advantage, and is often sufficient when the conjunctivitis is slight. For the treatment of a more severe attack, as well as for that of the other complications of eczema tarsi, such as ectropium, entropium, trichiasis, ophthalmia scrofulosa, etc., I must refer you to special works on ophthalmic Surgery.

Another Victim to the "Oxford and Cambridge Mission to Central Africa."—The Rev. H. C. Scudamore has died of the endemic fever at Chibisa's Station, River Shire, on January 1, in spite of the most unremitting attention from Dr. Dickenson and other members of the Mission. Famine and great distress prevail amongst the natives.

ORIGINAL COMMUNICATIONS.

CLINICAL MIDWIFERY.

By FRANCIS H. RAMSBOTHAM, M.D.

Physician-Accoucheur to the London Hospital, etc.

(Continued from page 37.)

The following three cases of early abortion with dangerous hæmorrhage came under my notice between the first of January, 1840, and last day of December, 1844; also the two cases of uterine hydatids detailed below:—

Abortion at Two Months, with Profuse Hæmorrhage.

Case 209.—On October 22, 1842, I was sent for by a Medical friend to Mrs. M., Stoke Newington. She was not more than two months advanced; the day before she had undergone considerable exertion, was attacked with uterine pain and profuse hæmorrhage early in the morning, and had expelled the ovum broken about an hour before my arrival. The hæmorrhage still kept on in a violent degree, and she was very faint and pale when I arrived. I felt there was something solid still in the uterus, which I could not scoop out; I therefore plugged the vagina. This completely controlled the discharge. On the next day, when I removed the plug, the substance which I had felt before had come down sufficiently low for me to draw it away, having grasped it by the extremities of two fingers. It was a portion of the deciduous membrane thickened. There was no more flooding. I watched her for ten days; there was no return, and she recovered well. This lady had miscarried at the same period in her last pregnancy, but I attended her afterwards of three or four children at full time.

Abortion at Two Months, with Profuse Hæmorrhage.

Case 210.—On February 22, 1844, in the afternoon, I was sent for by one of the midwives to Mrs. S , a patient of the Royal Maternity Charity, not more than eight weeks advanced in pregnancy. Four days before she sustained a sudden fright, which was speedily followed by some discharge of blood, and soon after by uterine pains. The flooding increased, and became so profuse that the midwife thought she would die. It had soaked through the feather bed and the mattress, and lay in a pool upon the floor. The midwife said she must have lost half a pailful. I was not at home when they came for me, and a friend kindly went in my stead. He gave her ergot and plugged the vagina. When I saw her on the morning of the 23rd, she had rallied considerably, and there had been but little loss during the night. I removed the plug, and felt the ovum half protruded through the os uteri. I scooped it out by the two first fingers of the left hand without any difficulty. The flooding did not return, and she recovered well.

N.B.—It is not often that we meet with such profuse hæmorrhage with so small an ovum. Indeed, we are accustomed to consider early miscarriages as devoid of peril, and to say that the later in pregnancy that occurrence takes place, the greater the chance of its being attended by dangerous flooding. Yet I have seen no few instances where the patient's life has been very much jeopardised by hæmorrhage under the expulsion of an equally small ovum as this was.

Abortion, with Profuse Hæmorrhage.

Case 211.—On September 30, 1844, at 4 a.m., I was called by a professional friend to Mrs. S., Houndsditch, the mother of a family, who considered herself five months' pregnant. There had been a draining of blood for three or four days, with slight uterine pain; but at ten at night it suddenly increased to a violent flooding. I found the discharge still going on in a copious and dangerous degree, and the patient very much depressed. I could feel the ovum partly protruded through the os uteri. I got the ends of the two first fingers of my left hand behind it, and easily scooped the whole out. The hæmorrhage ceased immediately, and she did well. The ovum was diseased, and not above seven or eight weeks' old. It was not in the least putrid, though it had lain dead *in utero* for so many weeks. This, indeed, I have remarked frequently, both with regard to a young ovum as also an early placenta.

N.B.—There are few cases, either in Medicine or Surgery, the treatment of which is so satisfactory as that of an early abortion accompanied by flooding, when the ovum is half or two-thirds protruded through the os uteri. If the ends of two fingers can be got behind it, and it can be scooped out, however violent the hæmorrhage had previously been, directly the ovum is removed the discharge ceases, does not return, and the patient may be left with perfect safety.

(d) "A Practical Treatise on the Diseases of the Eye," by W. Mackenzie, M.D. Fourth Edition, p. 145. London: Longman, Brown, Green, and Longmans.

(e) ℞ Hydrargyri Bichloridi, gr. j.
Hydrochloratis Ammoniæ, gr. vj.
Cocci Cacti, gr. jss.
Alcoholis, ℥j.
Tere simul, adde aquæ uncias sex, et cola per chartam.

Signa.—Pour out half a tablespoonful of this fluid, and mix it with as much boiling water in a teacup previously warmed. With a piece of old linen or soft sponge bathe the eyelids with the mixture for a few minutes, and then, by leaning back the head, allow a little of it to flow in upon the eye. Repeat this thrice daily.

Uterine Hydatids.

Case 212.—A lady whom I had attended with her first child in May, 1839, after menstruating three times, the last towards the close of January, supposed herself pregnant early in February, 1840. I saw her in the middle of March, in consequence of distressing vomiting. This was somewhat relieved by appropriate remedies, but by no means removed. On April 16 my advice was again sought. I found her suffering periodical uterine pains, with some hæmorrhage, and I thought she would miscarry. The uterus was not then to be felt above the pubes; the os uteri was quite close, and gave to the finger the sensation it usually possesses at between two and three months of gestation. The pain soon ceased, but the bleeding continued for three days. After an interval of ten days' cessation, it returned with a return of the pains. The sickness now harassed her more than ever; she passed bad nights, lost her appetite, grew rapidly thin, her features became prominent and sharp, and her countenance, usually bright and cheerful, assumed an unpleasant expression, though not more so than we frequently see in early pregnancy. She complained of a fixed pain within the left ilium, and on May 13 she vomited a little blood; but the same thing had happened to her also a year before. From this date till May 20 she enlarged slowly; but after that day her increase in size was so rapid that the uterus could absolutely be observed to grow from day to day, and on the 30th its fundus had nearly reached the ensiform cartilage. The general bulk was as great as at the end of eight months of gestation, and the os and cervix were well developed, corresponding with the size of the uterus itself, and simulating their condition towards the termination of pregnancy. One finger could be introduced within the mouth, but nothing definite could be detected. Nevertheless, from the rapidly-increasing bulk, I strongly suspected the presence of hydatids. At 4 a.m., on May 31, I was hastily summoned, found the uterus had begun to act about one, and that pains were following each other every four or five minutes. There was a slight draining of blood going on. The os uteri admitted two fingers readily, but it was very rigid; a soft mass could be felt within the cavity. Considerable hæmorrhage was occasioned by my examination, and she fainted. As the os uteri would not admit the hand for the removal of whatever might be within, and as I considered her in a state of danger, I requested a consultation, and a gentleman who had formerly lectured on midwifery came to my assistance at 9·45. In the meantime the hæmorrhage had been controlled by the application of cold, and three or four hydatids had passed, which placed the nature of the case beyond doubt.

It was very desirable,—indeed almost necessary,—that the uterus should be emptied speedily; but the condition of its mouth precluded the possibility of effecting that object by the hand. It was therefore agreed that we should endeavour to break up the mass, so as to enable us to extract it piece by piece. Having no more convenient instrument at hand, my friend introduced the handle of a gravy spoon, and moved it about in all directions within the uterus, meeting with very little resistance, and stirring it round with some energy. While I had my hand on the abdomen to steady the uterus, I felt most distinctly the extremity of the spoon grating along the inside whenever it came into contact with the anterior portion of the parietes. I must confess I was a little alarmed at this rather rough mode of proceeding, but it answered the purpose admirably; it did not provoke hæmorrhage; portions of the mass of different sizes being broken off passed into the vagina, and were easily removed by the fingers; and in this way, in little more than half an hour, we got away about three quarts of hydatids. The uterus appeared to be stimulated to contraction by the practice pursued, for it expelled portion after portion, and closed its cavity completely when the whole was brought away. Very little blood was lost during the operation, and the os uteri continued as rigid and little dilated to the last as it was when I first examined, so that any forcible attempt to pass the hand through it would most probably have been attended with fatal injury. I left her at noon quite safe, and her recovery, though slow, was unchecked. I have attended her with seven children since this occurrence, the first within a year, and the last in October, 1852. She enjoyed excellent health all this time; there was never anything untoward in her labours, nor has she ever miscarried.

Uterine Hydatids.

Case 213.—At 6 p.m., on February 17, 1843, my advice was sought by a professional friend for Mrs. H., Wapping, who considered herself seven months gone in her eighth pregnancy. She had not, however, been sure of her state for some time, as she had increased very rapidly during the last month, and had not felt any fœtal movements. Besides which, for the last three or four months, she had been subject to occasional, irregular, slight sanguineous discharges, and five weeks previously had suffered a profuse loss of blood. On the same afternoon before my visit she was attacked with periodical uterine pain, attended by alarming flooding; and at half-past five o'clock expelled nearly a wash-hand basin full of hydatids. The hæmorrhage had almost ceased when I arrived, and soon after another mass, the size of a small melon, came away. This induced me to pass my hand into the uterine cavity, which I did with great ease, as the os uteri was widely dilated, and emptied it of about half a pint more. I was satisfied none remained. The uterus contracted closely; the flooding ceased entirely; a discharge like the lochia was furnished for a few days, and she was rapidly restored to her usual health. More than two years afterwards she brought a friend to my house as a patient. She said she had been very well since her recovery from the illness detailed, that the catamenial periods had been quite regular, but that she had not been again pregnant.

N.B.—It was formerly generally believed that these transparent vesicular bodies, generated in the uterus, were true hydatids, parasitic animals, similar to what are sometimes found in the substance of the viscera, and not unfrequently in the liver of the sheep. Linnæus, Percy, and many others held this opinion. More recent observation, however, has taught us that they are merely a hypertrophied and dropsical condition of the villous prolongations of the chorion in the young ovum, hereafter to form the placenta; so that they consist of nothing more than a disease of the early ovum. Mad. Boivin indeed calls them, after Morgagni, "vesicular moles," which is as good a name for them as could well be adopted. Each of the villi of the chorion forms a framework for the transmission of vessels, and no doubt to secure these minute vessels from pressure, is made up of a bag of fluid, which bulges out and contracts frequently, like a string of short sausages, or a row of beads. This fluid ought gradually to disappear as the blood-vessels enlarge, and cease to require the protection which it affords; but if through morbid action it increases in quantity instead of diminishing, the cysts which secrete it enlarge in the same proportion as they become distended; and this change taking place in an immense number at the same time, the grape-like cluster of vesicles is produced, which we call "uterine hydatids." The deciduous membrane at the same time becomes extended and thickened as the villi enlarge, which, with the increase in the size of the blood-vessels, will account for the dangerous hæmorrhage that always accompanies the expulsion of these bodies.

8, Portman-square.

(To be continued.)

AN EXPERIMENTAL INQUIRY INTO THE EFFECT OF THE APPLICATION OF ICE TO THE BACK OF THE NECK ON THE RETINAL CIRCULATION.

By J. HUGHLINGS JACKSON, M.D., M.R.C.P.,
Assistant-Physician to the Hospital for Paralysis and Epilepsy;
Physician to the Metropolitan Free Hospital;
Lecturer on Physiology at the London Hospital Medical College;
Late Clinical Assistant at the Royal London Ophthalmic Hospital, and
Physician to the Islington Dispensary.

AT the Hospital for the Epileptic and Paralysed I tried the following experiments in order to see if I could influence the eye,—the size of the pupil, the calibre of the retinal arteries, and coloration of the optic disc,—by applying cold to the back of the neck. It occurred to me to do so on reading Dr. Chapman's communication in the last Number of the *Medical Times and Gazette*, entitled, "A New Method of Treating Disease by Controlling the Circulation of the Blood in Different Parts of the Body." The patient on whom I tried it was a girl of fair general health, but who was subject to sudden startings of the whole body for which she had been admitted. When ice was applied to the back of the neck and upper part of the dorsal spine, I could detect no alteration whatever in the size of the pupil. I confined my attention to one. It varied readily in light and shade. (I tried this experiment on another little girl several times with the same result.) I then examined the fundus with the ophthalmoscope, noting carefully the size of all the vessels, and the degree of coloration of the optic disc. The nurse then applied the ice to the back at the lower cervical and upper dorsal regions, but there was no change whatever; the vessels remained of the same size and the disc of the same colour. I next examined when the ice was applied to the back of the head and then to the side of the neck, and I tried the same experiments on a second patient; in both with the same results.

Now the pupil not being artificially dilated, it was of course not very easy to estimate the size of the vessels and the coloration of the disc. Yet I had it well and steadily under view when the ice was applied and when it was taken away. I, however, dilated one pupil with atropine, and then saw the disc as plainly almost as the child's face. Had it, to use such expressions, blushed or paled, it would have been readily detected. I looked both before, during, and after the application of the ice. The large vessels did not alter in the least, nor did a small artery, like a hair, that I watched with great care, and, what is of more importance, I did not detect the least change in the colour of the optic disc. The ice was applied to the back of the neck for exactly nineteen minutes. I was very careful to keep the disc steadily under view the moment the ice was suddenly applied and when it was suddenly taken off, and indeed I kept the disc under a steady gaze nearly the whole of the nineteen minutes. Finding no difference on taking away the ice after this long application, it was re-applied almost directly, and then, the disc being under view, the nurse took the ice away, and immediately substituted a flannel wrung out of very hot water. I could find no change.

I used the ordinary ophthalmoscope in the above examinations.

Next morning I examined the retina again, and this time by the direct method. The disc seemed of course of large size, and I had no difficulty in keeping it under view at the moment of suddenly "making contact" and of suddenly "breaking contact." I found no change in the size of the arteries or veins, nor in the coloration of the disc.

So far, then, I could *see* no change in the circulation, no change of colour in the disc; but I freely admit that very likely with the greatest care I might be unable to detect some little alteration of colour. Nor would any one I suppose who adopts Dr. Chapman's views believe that the changes would be very marked, so as to be easily appreciated by the eye. Still these observations may be of some value, if confirmed, in settling that point by experiment,—viz., that there is no perceptible alteration.

I tried then to get information from patients in the Hospital who were using the ice for purposes of treatment as to any alteration in the function of the eyes. [The ice is applied for half-an-hour, and then hot flannels for half-an-hour, the patient sitting in a chair so that there could be no defect from position.] One little girl complained that several times a day her sight was "queer," but this is a common complaint in epileptics, and this patient's sight did not fail when the ice was applied. Two other patients were not intelligent enough to give me any answers at all. In a fourth the answers were unsatisfactory. I asked the patient what she felt, and she described the local sensation, and spoke of a pain over the right eye, and, in reply to several questions, said there was no other feeling. But, on asking the leading question, "Is there anything wrong with your sight when the ice is applied?" she said there was a little dimness.

Of course the next thing was to apply the ice to myself, and see if it affected my own sight, but I have not had time, and this has been the case with a Medical friend who kindly offered to submit himself to the experiment. I have, however, been informed by the Matron of the Hospital, who, at my request, tried the experiment on herself, that it produced for a time dimness of vision, which was followed by greater clearness. I shall proceed to make further experiments on intelligent patients, in order to get a wider basis of evidence than can be supplied by one case.

My object in making these experiments was not so much for the sake of learning the effect of this treatment on the circulation in the eye, as to be able to form some idea of its effect on the cerebral circulation. Dr. Chapman in the communication referred to, writes (page 60):—"For example, intending to direct a fuller and more equable flow of blood to the brain, I apply ice to the back of the neck and between the scapulæ." If the circulation in the brain were affected by the application of ice to the back of the neck, it is, I think, probable that the branches of the arteriæ centralis retinæ would be affected too.

5, Queen-square, Russell-square, W.C.

CASE OF HEREDITARY POLYDACTYLISM.

By ARTHUR MITCHELL, A.M., M.D.,

Deputy Commissioner in Lunacy for Scotland.

The following case of hereditary polydactylism is thought worthy of record:—

A man with six fingers on each hand and six toes on each foot married a woman, normally constituted in this respect, and not related to him. They had three children (two daughters and a son), each with six fingers on each hand and six toes on each foot.

One of the daughters died without children. The other daughter, whose supernumerary fingers were taken off when a child, had two bastards to different fathers—the first, a girl, having six fingers on each hand and six toes on each foot, and the second, a boy, having the usual number of fingers and toes.

The son married a woman without any such excess, and not related to him, who had previously borne two illegitimate children, in all respects normal. By this woman he had seven children,—1st, a daughter, with six fingers on each hand and six toes on each foot; 2nd, a daughter, with six fingers on the right hand and six toes on the right foot; 3rd, a son, with six fingers on each hand and six toes on each foot; 4th, a daughter, with six fingers on each hand and six toes on the right foot; 5th, a son, with six fingers on each hand and six toes on the left foot; 6th, a daughter, with six fingers on one hand, but whether right or left is not known, and six toes on the right foot; 7th, a son, with six fingers on each hand and six toes on the right foot.

Of the nine children forming the third generation, all are alive except two, but none have yet borne children. The additional digit projected always from the outside of the hand and foot, and was without metacarpal or metatarsal bone. No hare-lip, cleft palate, squinting, deafness, lameness, or other defect or deformity occurred in the family, but in several of them the palate is much vaulted and the teeth irregular. Though several of the children are passionate and wayward in disposition, they are all regarded as of sound mind.

The following diagram presents this remarkable case in a way which makes it easily understood. The capital letters are used for males and the small letters for females, and the asterisk attached to the letter implies that in that individual polydactylism occurred.

First Generation.	Second Generation.	Third Generation.
A* married b, by whom he had	c* died childless.	
	d* gave birth to (being unmarried)	g* has not yet borne children.
		H " " "
	E* married f, by whom he had	i* " " "
		j* " " "
		K* " " "
		l* " " "
		M* " " "
		n* " " "
		O* " " "

Illegitimacy in Scotland.—During the month of June, 1863, there were registered in the eight principal towns of Scotland the births of 3337 children, of whom 1679 were males, and 1658 females. Of these, 2994 were legitimate, and 343 illegitimate; indicating a proportion of 1 illegitimate in every 9·7 births, or 10·2 per cent. of the whole as illegitimate. In the several towns (Edinburgh and Leith considered as one town), the proportions of illegitimate births were the following:—In Greenock, 4·1 per cent.; in Glasgow, 8·9; in Edinburgh and Leith, 9·1; in Paisley, 9·4; in Perth, 12·9; in Dundee, 16·5; and in Aberdeen, 17·4 per cent.—*Registrar-General's Report.*

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

CASE IN WHICH CHOREAL MOVEMENTS HAD BEEN PRESENT FROM INFANCY TO MANHOOD.

(Under the care of Dr. BROWN-SEQUARD.)

JAMES D., aged 20, was admitted under the care of Dr. Brown-Séquard on August 20, for chorea, from which he appears to have suffered nearly the whole of his life. The history of the disease, obtained from his mother, was, that the symptoms did not present themselves, as far as she knew, until he began to walk. This was so late as the age of three and a-half years. He then began "to shake," and has continued the movements until the present time. Especial inquiry was made as to her confinement, which, although she said it was a severe one, was not unusually prolonged (twenty-four hours), and instruments were not used. He was her first child, and was not insensible when born. He had convulsions during the whole of the first night of his life, each lasting for a few minutes, and coming on every half hour. After this, however, he continued, so far as the mother could tell, quite well until the choreal symptoms presented themselves, and, since, except the special ailment for which he attends, his health has nearly always been good. He is well grown, and appears a well-developed young man. He is very intelligent, but the slightest movement is irregular and jerking, and this unfits him for any employment. His head, trunk, arms, and legs, during the observation, were constantly moving, and pretty equally on both sides. Dr. Brown-Séquard directed attention to the great hypertrophy of the muscles of the neck from their constant action. He cannot raise a cup to his lips, but is obliged to bend his head to it to drink. When he walks he does so with his knees drawn together and his feet inverted. In speaking he has some hesitation, but is never quite unable to proceed. Lately he has had pain at the lower part of the lumbar portion of the spine. Dr. Brown-Séquard directed the actual cautery to be applied in three or four points in the immediate neighbourhood of the painful part of the spine. He was to take, twice a day, three drops of Fowler's solution, with ten drops of the solution of the ergot of rye in infusion of calumba.

The mother says that a brother of his, two years younger, has some affection of the intellect, so as to be unfit for any occupation. He has not, however, any paralysis or choreal movements. No further history of any disease of the nervous system in the patient's family was obtained after careful inquiry. This patient was not seen again.

CHOREA IN AN OLD WOMAN.

(Under the care of Dr. BROWN-SEQUARD.)

A woman, aged 68, attending the Hospital, under the care of Dr. Brown-Séquard, suffering from chorea. Dr. Brown-Séquard stated that at such an age chorea was extremely rare. The woman was unable to keep quiet any of her limbs, and was constantly wriggling about. It was not, Dr. Brown-Sequard stated, a paralysis agitans, as that term was limited to a localised affection, although the distinction was arbitrary, and paralysis agitans might be called local chorea. Another class of cases in which the movements were irregular was the palsy produced by metallic poison, as lead or mercury. In this case the trunk was moved, and all the movements were arrested by sleep. This patient was taking the iodide of potassium, and one-thirtieth of a grain of strychnia three times a day. She expressed herself as having improved very much under this treatment.

ST. THOMAS'S HOSPITAL.

CHOREA IN AN AGED PERSON.

(Under the care of Dr. PEACOCK.)

M. R., aged 57, was admitted into St. Thomas's Hospital under the care of Dr. Peacock, on May 21. She stated that about four months before she was greatly alarmed by her daughter being brought home to her, without any warning, in a maniacal state, and that she was immediately seized with the convulsive twitches in all parts of the body; these had continued up to the time of her admission. She had never previously had any nervous disease, but suffered about a year and a half before from severe affection of the kidneys. She was pale and old-looking for her age. When free from excitement there was little movement of the muscles of the face and head; but when she endeavoured to speak or make any exertion, the convulsive twitches in the face, head, and upper extremities became very marked. She could protrude her tongue, and keep it protuded. She could also extend her hands, and retain them with considerable steadiness, and she was able to walk with a tolerably firm step. The pupils were natural; the tongue somewhat dry and ragged; the pulse 84, and bounding; and the cardiac sounds, though slightly flat, were without murmur She took her food well, and the bowels acted naturally. She was first directed to take rhubarb and blue pill, with a vegetable bitter and alkali; and on the 27th to have ten grains of the saccharine carbonate of iron three times daily, with meat diet, and half a pint of porter.

On June 1 the dose of the iron was increased to fifteen grains; on the 6th to twenty grains; and on the 10th to twenty-five grains.

17th.—Though she was much less anæmic looking, she was not at all steadier, and she was directed to discontinue the iron, and take four minims of the liq. potassæ arsenitis three times daily.

20th.—The dose was raised to five minims; on the 24th to six; and on the 27th to seven, when she complained of some dryness in the throat, but was steadier since the use of the arsenic.

July 16.—The dose was raised to eight minims, and shortly after she began to complain of distracting headache, and the remedy was therefore discontinued.

25th.—She was directed to take two grains of sulphate of zinc in a fluid ounce of infusion of valerian three times daily.

By September 6 the zinc had been raised to twenty grains for a dose, and this without any unpleasant effect being produced, except occasionally a little sickness when the dose was increased. This she continued till October 21, when she was certainly much steadier than at the time of her admission, and she was greatly improved in appearance. There was, however, an unusual twitch of the mouth and head, and the affection seemed to be rather assuming the character of paralysis agitans. As no further benefit seemed likely to occur, she was discharged.

CHOREA, AFFECTING THE MUSCLES AT THE BACK OF THE NECK, PRODUCING JERKING OF THE HEAD BACKWARDS.

(Under the care of Dr. BARKER.)

[Reported by Mr. J. DODD SWALLOW.]

Agnes W., aged 16, a housemaid, was admitted into Mary's Ward, September 24, 1860. She had violent and continuous jerking of the head backwards. She stated she has had these jerkings during the last six weeks. They came on suddenly without any known cause. The jerks come on every second or two, and last about the same time; the head is thrown backwards with considerable force; there is no jerking, nor any choreic movements elsewhere; the jerks cease during sleep; the catamenia are regular; appetite is good. She has never had rheumatism, neither has she had epileptic fits nor any hysterical attacks.

The history of the patient tells us she has had two attacks of chorea. The first attack occurred seven years since, and lasted three weeks; the second attack occurred four years since, and also lasted three weeks. These were decided attacks of chorea, and in each there was no jerking of the head, as in the present attack.

The treatment consisted of arsenic, eight minims of Fowler's solution being taken three times daily, a shower-bath every morning, with a liberal diet.

Under this treatment she gradually recovered; the jerking movements became less frequent, then ceased for a short time occasionally. The pressure against the hand, when placed at the back of the head to restrain the movements, became less, and her general health improved.

October 16.—The report states that the jerking movements have quite ceased, and she left the Hospital the following day.

CASE OF CHOREA TREATED BY ARSENIC AND SHOWER-BATHING.

(Under the care of Dr. BARKER.)

F. B., aged 11 years, a delicate, anæmic girl, was admitted February 23, 1861.

The patient, who is a very intelligent child, says the attack has been coming on gradually during the last two months; she states she was much frightened about the time of the commencement of the affection. When the disease first came on she lost power in her feet, so that she could not walk very far, she then had involuntary startings of the legs; this came on in the arms also in the course of ten days or a fortnight, so that she could not hold anything in her hands. In speaking she lisps a good deal, which was not the case before the attack. She thinks she has less power in the left foot and arm than in the right side; she drags both feet on the ground in walking. The patient had an attack of the same nature about two years ago, when she was a patient in St. Thomas's Hospital, under Dr. Barker, and left the Hospital well, after being under treatment about two months. Bowels regular; appetite good.

Dr. Barker ordered her to take three drops of the liquor potassæ arsenitis three times a-day, and to take a shower-bath every other morning.

March 1.—Is better; can hold things feebly in her hands, and walks better; appetite good. Dr. Barker ordered her to take three grains of the citrate of quinine and iron three times a-day. To discontinue the arsenic.

15th.—She has been gradually improving, and can now walk without dragging the feet in the least; can hold firmly by the hand. She has no startings of the extremities; appetite good; bowels regular; sleeps well. To continue the iron and quinine.

20th.—Is much better; no startings; walks well. Discharged.

YORK COUNTY HOSPITAL.

CASE OF CHOREA TREATED BY ARSENIC—RECOVERY.

(Under the care of Dr. SHANN.)

In this Journal, March 22, 1862, Dr. Wilks suggests that the great benefit derived from the treatment of chorea in Hospitals is due to the greater quiet and better food, and thinks that drugs have less to do with recovery than is generally imagined. In the following case, the change from a low neighbourhood, and from poverty to a Hospital, is too marked to have been without benefit, so that it is impossible to judge what share the arsenic had in the recovery. Although not stated in the report, the diet, in Dr. Shann's case, "was as nutritious as the stomach could bear."

Lewis W., aged 13, was admitted, from a crowded, miserable dwelling in a small street, under the care of Dr. Shann, at the York County Hospital, January 22. He first came under the notice of Dr. Shann a week or two previously at the Dispensary, and was once seen at his home, and recommended to apply for admission into the Hospital, from the nature of the home—a crowded, ill-ventilated, dark room, in a narrow street.

When admitted on January 22, he was suffering from most distressing choreal movements, and was quite unable to articulate. ℞ Liq. potassæ arsenitis, ♏ iv.; æth. chlorici, ♏ x.; dec. cinchon. ad ℥j., ter. die; Pil. aloes c. myrrh, gr. x., h.s.s.

January 23.—A little better, but very restless, and crying and distressed all day.

24th.—A draught containing fifteen drops of chlorodyne, a quarter of a grain of tartar emetic, and half a drachm of aromatic spirit of ammonia in camphor mixture was given at bed-time.

25th.—Had more sleep, and was better last night, but was obliged to have his bed made on the floor, having frequently fallen out of bed. Much quieter and better in all respects this morning. The draught made him very sick and vomit freely, but produced no sleep. He can speak well this morning, and his memory is improved. Tongue clean. Taking food pretty well to-day, not yesterday. Urine rather defective, with a deposit of lithates and a film of phosphates.

27th.—Very quiet at present, and has been better since he was last seen; last night the best since admission. Bowels open. Urine more copious and natural in colour. A well-marked sound with the heart's action, apparently of a friction character, being, as it would seem, intermediate in time between the two natural sounds, which in certain localities can be clearly distinguished from it, though in some situations the morbid sound completely masks them.

29th.—Had a good night. The bruit or friction sound, masking both heart sounds, on applying the stethoscope over the nipple, but about an inch and a-half below this, both sounds of the heart can be heard, neither of them being distinctly affected by the bruit.

February 1.—Greatly improved. Had a good night, and eats well. Muscles generally quite steady this morning. Bowels open. Urine thick on standing, and coated with a pellicle of phosphates.

5th.—Improving; sleeps well, and eats sufficiently, but has some difficulty in swallowing solids. [This case is in direct contrast with that of a little girl, suffering from chorea, in the female ward, with whom the difficulty consists in swallowing liquids.] No choreal symptoms at the present moment. Bowels open. Urine natural. Three teaspoonfuls of cod-liver oil twice a-day; to continue the arsenic.

7th.—Still looking anæmic and wasted. Can now feed himself, and has less difficulty in swallowing solids.

12th.—Greatly improved, and swallowing without much difficulty.

18th.—Improving.

19th.—Going on very well in all respects.

March 1.—No symptoms of chorea remaining. Face fat, and of a good rosy colour. Left the Hospital well.

He took the arsenic from the day of admission to the day of discharge.

MIDDLESEX HOSPITAL.

CHOREA—FATAL RESULT—SOFTENING OF THE BRAIN AND SPINAL CORD.

(Under the care of Dr. HENRY THOMPSON.)

[Reported by Mr. Sidney Hayward, Clinical Assistant.]

Sarah W., aged 16, was admitted into the Hospital April 22, 1862. On April 13 she received a severe fright while riding on the outside of a cab. The restless movements were observed immediately on her return home the same day, and continued to increase in severity up to the time of admission.

When admitted, there were constant and violent restless movements of the trunk and extremities, so that the patient required a special nurse to prevent her being thrown out of bed by their violence. The mental faculties were perfect, though she was unable to articulate more than a single syllable clearly. The pupils appeared normal; the tongue was coated, and the bowels open. Her mother stated that patient had always had good health, except that she had not menstruated for five months, and that she had been severely burnt when a child, since which accident had been "nervous." She had only one brother, who had been epileptic since birth. Ordered one grain of sulphate of zinc three times a-day.

April 23.—Movements as yesterday. Ordered the following draught every six hours:—℞ Liq. ammonia acetatis, ʒss.; vini antimonii potassio-tartratis, ♏x.; tinct. opii, ♏v. Compound soap liniment, with belladonna, was to be applied to the spine. In the evening she was ordered to take every two hours:—℞ Tinct. hyoscyami, ʒj.; acid. hydrocyanici dil., ♏ij., ex. mist. camphoræ.

24th.—Obtained a little sleep during the night for short periods only. Pupils widely dilated. To continue the draught every three hours; cold affusion to head; wine. In the evening one-third of a grain of morphia was administered by subcutaneous injection.

26th.—During the night she had three and a-half grains of morphia by subcutaneous injection. The pupils did not become contracted, and she only obtained two hours' sleep at intervals throughout the night. The movements ceased entirely during sleep, but were as violent as ever when she is awake. Laudanum and chloroform were applied along the spine without effect. ℞ Quinæ disulph., gr. iij.; liq opii, ♏x.; acid. sulph., dil., ♏x., ex. aq., 3tis horis. Urine, specific gravity 1030, not containing albumen.

27th.—Movements slightly relieved for a short time by a warm bath. ℞ Ætheris chlor., ʒss.; liq. opii. sed., ♏xv.; ex. aq. 2dis horis.

30th.—Movements not in the least abated. Two grains of phosphate of ammonia added to the draught. The bowels, which had been obstinately confined since the 23rd, were well opened yesterday after numerous purgatives.

May 1.—Movements were relieved for a few minutes by the inhalation of a small quantity of chloroform, but returned immediately after its influence passed off. Slept one hour during night. Pupils normal. Ordered the following pill every two hours:—℞ Zinci. sulph., gr. j.; camphoræ, gr. ij.; ext. hyoscyami, gr. ij. In the evening the dose of the sulphate of zinc was increased to two grains.

3rd.—Pupils much dilated; vision impaired; objects appear unnaturally large; throat dry and sore. The extract of hyoscyamus was omitted, and the dose of sulphate of zinc was increased to three grains. During the day she had fifteen, and subsequently twenty-five, minims of chlorodyne without effect. The movements were relieved for a few minutes last night by a warm bath.

4th.—Yesterday afternoon, immediately after injection of morphia (gr. j.), the pupils, which had previously been widely dilated by the hyoscyamus, became suddenly contracted to the size of a pin's head; she became intensely delirious, and in the course of an hour sank into a comatose condition, with lividity of the lips, foaming at the mouth, and had a discharge of much tenacious mucus from the nostrils. Pulse almost imperceptible; respiration 12, variable. On the application of cold douche she became sensible from time to time, and after its long-continued application became sufficiently aroused to be left to herself, and since has slept fairly at intervals, but the lividity of the lips continued, and the breathing was sonorous. Galvanism was also applied, but it did not appear to produce any effect.

5th.—Slept during night for an aggregate of three or four hours at intervals. Pulse 100, of fair power; respiration 40; lividity of lips continued. Rhonchus throughout lungs, in some parts mixed with sibilus and moist sounds; movements pricipally confined to trunk, and but little affecting extremities. Ordered a squill mixture with carbonate of ammonia, and an electuary containing iron.

6th.—Complained of the painful dyspnœa preventing sleep. Constant vomiting; lividity of lips continued; respiration, so far as they could be counted, 68, very abrupt and gasping; bowels freely open; the skin became hot and dry. Ordered every six hours an effervescing draught of citrate of ammonia, and a pill containing two grains of blue pill and one grain of extract of conium twice a day.

7th.—No sleep during the night; lips less livid, but much excoriated and suppurating; chest sounds as before. Towards afternoon the movements became less, apparently from exhaustion; the surface became cold and clammy; pulse imperceptible. She died at five in the evening, the movements having continued up to the moment of death. For some days before death the elbows and ankles had become excoriated from the constant movement.

It will be observed, Mr. Hayward remarks, that from the report none of the remedies, although carried to their fullest medicinal extent, produced any permanent amelioration in her condition; and that although not affected by three and a-half grains of morphia on the 26th of April, she became comatose on the 3rd of May after the injection of only one grain. It must, however, be remembered that she had taken forty minims of chlorodyne on the morning of the 3rd, previous to the injection of morphia.

Autopsy the Following Day.—No rigor-mortis. Head.—Vessels of pia mater distended with blood. Bloody points in cerebral substance rather more numerous than normal. Substance of brain generally very much softened, especially those in the neighbourhood of ventricles—the anterior pillars of the fornix and the septum lucidum. Left side of cerebrum more softened than right. Cerebellum in same condition. Thorax.—Heart's substance pale. Cavities larger than natural, one of the folds of the tricuspid valve partially adherent to wall of ventricle. Left lung much congested, not sinking in water; a deposit of cretified tubercle at apex. Bronchial tubes deeply injected. Right lung contains no tubercle; middle and lower lobes studded with numerous patches of pulmonary apoplexy; upper lobe much congested, slightly granular, apparently passing into a stage of hepatisation. Bronchial tubes as in left lung. Abdomen.—Intestinal vessels distended with blood. Mesenteric glands healthy. No tubercle or ulceration of the bowels. Kidneys congested, but normal. Liver in the first stage of hepatic congestion. Stomach injected, its mucous membrane marked with numerous points and patches of extravasated blood. Spine.—Marked congestion of all the blood-vessels, both those external to dura mater and those ramifying on the pia mater. Cervical swelling softer than natural. Considerable softening of whole substance of cord reaching from third or fourth dorsal vertebra to sixth and seventh; in the last situation the softening was extreme. No compound granular cells were discovered on microscopic examination by Dr. Thompson, Dr. Goodfellow, and Dr. Murchison.

METROPOLITAN FREE HOSPITAL.

CHOREA FOLLOWING FRIGHT—RECOVERY.

(Under the care of Dr. JAMES JONES.)

MARTHA B., a healthy-looking, fresh-coloured, well-nourished, well-developed girl, of 11 years of age, was in apparently perfect health up to nine days ago, when she was severely beaten by her aunt, with whom she was staying at Woodstock, in Oxfordshire. She was much alarmed by her aunt having threatened to kill her, and remained awake the whole of the night.

The next day symptoms of chorea appeared in the right half of the face, and in both the right limbs, and soon extended to the other side. They continued to increase in severity up to the time of her admission. The choreic action was then general throughout the body, but the right limbs and the right side of the face were more severely affected. The pupils were large, and responded normally to the stimulus of light. There was no squint; the eyes, although in constant motion, acted in unison. The tongue was clean, the appetite pretty good, the bowels regular, the urine clear, and its expulsion quite under control. The heart's action was normal, and the pulse, as well as it could be felt, appeared regular. The catamenia, it is hardly necessary to say, had not yet appeared.

No source of excentric irritation could be discovered; there were no worms passed, no cutaneous disease. Neither the patient nor any of her family had suffered from rheumatism. There was no headache, nor spinal pain, nor tenderness. The convulsive action ceased during sleep, but reappeared directly on waking.

The treatment commenced with a brisk dose of castor-oil and turpentine. No worms, nor anything deserving of notice appeared in the stools. Perchloride of iron was then given to the extent of five grains a day in divided doses. In fourteen days all signs of chorea had ceased, and the girl seemed to be in perfect health.

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Medical Times and Gazette.

SATURDAY, JULY 25.

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SANITARY STATE OF THE ARMY IN INDIA.

THE Report of the Royal Commissioners on the Sanitary State of the Army in India, and incidentally of the people of India generally, is a State document of the highest moment. We must receive its publication as evidence that the Government accept its conclusions, and will act on its advice. In fact, it could hardly be otherwise. The proofs of the immense loss of European life in India, and of the neglect which permits this loss, are so cogent, that if Government were not disposed to act, public opinion would compel it. The statements and figures of this Report will be reproduced in every English newspaper in India, and from them will pass into the thousand native prints which represent native, and misrepresent European opinion. Every soldier will soon know that the mortality in India surpasses sevenfold that at home, and that the Commissioners think it preventable; that a soldier in England has, at 20 years of age, a probability of living thirty-nine and a-half years, while in India the probability is only seventeen and a-half years, and that his chances of sickness are much more, and his chances of cure much less than they ought to be, on the showing of men appointed especially to inquire into this point. Every native of India will soon be told that his European rulers are directly chargeable with the high mortality of their cities, since, by what will be represented as unpardonable neglect, the rules which European knowledge has shown to be necessary for health, have been strangely overlooked. On this ground alone it is evidently of great importance that this Report should not go out to India unless orders go with it at once to commence the measures indicated by the Commissioners.

Government will be attacked on another side. To maintain 100 soldiers in India 11 recruits must join them annually. If there are 70,000 soldiers in India, no less than 7700 men must yearly leave these shores for that dependency alone. All the economists in the kingdom will soon be on this scent, and will show, by adding up the cost of enlisting, training, transport, attendance in sickness, and reshipment of invalids, how costly a thing sickness is.

Then, is there a philanthropist in the land whose sense of justice will not be outraged by this picture of India after a century of occupation? Is this, then, all we have to show, and does our boasted skill in colonising really end in a result so despicable? After a century's rule have we not succeeded in carrying out the simplest maxims of health and the commonest decencies of life among a population absolutely under our control? How will it touch our national pride to find that the one city in India which is well drained, well supplied with water, and consequently less unhealthy by 100 per cent. than any other, is a French city?

As a matter of national duty, honour, and safety, our Government must not palter with this great question. The Royal Commissioners have recommended that in each Presidency mixed Commissions, composed of military and Medical officers, and of engineers, shall be appointed, first, to institute sanitary reforms everywhere, and secondly, to consider how to carry out some proposed fundamental changes. These are,—the shortening of the period of service; the location of one-third of the whole force on the hills; the proper selection of the indispensable military posts in the unhealthy parts; and the establishment of a system of registration of deaths among the civil population.

These are great questions, and ought to call into play the highest talent India possesses. The sooner the work is commenced the better. For not one moment longer than is absolutely necessary must the blood of our soldiers in India and of our Indian fellow-subjects be on our hands.

THE METROPOLITAN MAIN DRAINAGE WORKS.

A PORTION of the sewage of London is now being discharged into the Thames near Barking Creek. The Metropolitan Main Drainage is no longer a "scheme;" it has become in part at least a *fait accompli*. It has passed from the problematical into the existent. It is useless any longer to ask whether the best system for relieving the great city of its impurities has been resolved on; whether science and ingenuity could not have devised a better. Parliament and the engineers have carried out their plan, and we must take it for better or worse. A few years will decide whether the dismal forebodings which have been heard since the City and its suburbs were consigned to the tender care of the Metropolitan Board of Works were really prophetical, and whether their monstrous culverts are not destined to take their places beside the Thames Tunnel as monuments alike of engineering talents and failure.

We are now told that the convection of the sewage to Erith and Barking does not in the least interfere with the ultimate question of its utilisation. Brought to the river's edge, it would appear to an ordinary observer that the river is its certain destination, but we are warned by Mr. Bazelgette that this is not a necessary consequence. Collected in large reservoirs at the two points named, it may there be submitted to such processes as shall enable the agriculturist to deal with it. The water, apart from the sediment, will then only be discharged into the Thames, but why this should be brought so many miles for that purpose we are at a loss to understand. The truth is that the proposal to utilise the sewage at Barking and Erith is entirely an after thought, which renders nugatory and useless a great part of what has been accomplished. No doubt to one party in the contract this will be a matter of little moment when the works are finished and the bill paid.

However, there is nothing left at present but to accept what we believe to be at best a magnificent blunder, and as Medical journalists we shall endeavour to perform our part by putting our readers in possession of the main features of the operations, which, since the year 1856, have appealed equally to their pockets and their patience.

Up to 1849, such sewers as existed in London ran due north and south, and discharged their contents into the Thames. But the drainage at that time was only partial; a large number of the houses were not drained at all, but had cesspools attached to them, in which the excreta of the inhabitants accumulated, with what effect on the public health the Profession is well aware. In that year the Commissioners of Sewers commenced substituting sewers for cesspools. Some seven or eight hundred miles of drains were in time laid down, but the river was still the receptacle into which by far the largest number poured their contents. In addition, however, to the river, every available piece of water in the neighbourhood of London, even the Serpentine itself, received its allotted proportion of filth. The result, as every one knows, has been that the Thames has been converted into the largest, the foulest, the most stinking open sewer in the world. In 1856, the drainage of London was handed over by Parliament to the Metropolitan Board of Works. From that time to this they have had the power to tax and to tunnel, and their work is so far completed, that, on Saturday and Monday last, large parties from the metropolis had the peculiar satisfaction of watching, as long as their olfactory sense would allow them, a stream, black as Styx, and redolent as the Fleet of the Dunciad, rushing by gravitation, through a temporary channel, into the river, thirteen miles below London Bridge.

On each bank of the Thames, the valley on the sides of which London is built, has been divided by the Board of Works into three parallel zones, running east and west, in each of which a main underground tunnel or sewer has been constructed. These are termed respectively the High, the Low, and the Middle Level Sewers, according to the height of the districts at which they run. They intercept at right angles all the previously existing sewers, and, cutting off their direct flow into the Thames, carry the contents to Barking Creek on the north, and to Crossness Point, in the Erith marshes, on the south. The High Level Sewer on the north side is some eight miles in length, and runs from Hampstead to Bow. At its commencement it is 4 feet 6 inches in diameter, but increasing in proportion to the number of sewers it intercepts, it attains at its termination near Lea River a diameter of 12 feet 6 inches. Its maximum fall near its commencement is 50 feet in the mile, its minimum 2 feet. It is sunk at a depth of from 20 to 26 feet below the surface, and receives the rainfall and sewage of an area of fourteen miles. The Middle Level Sewer, which is nearly completed, extends from Kensal-green to Bow, and is laid at a greater depth than the higher, varying from 30 feet to 36 feet below the surface. The Low Level is to stretch from Cremorne Gardens to Abbey Mills, on the marshes near Stratford, and a portion of it will tunnel the Thames embankment. The waters of the Low Level Sewer will be raised by engines, at a pumping-station at Bow, to the junction of the High and Middle Level, and thence all the sewage of the north of London will descend by its own gravity through three enormous tunnels, 9 feet 6 inches in diameter, and nearly six miles long, to the main reservoir at Barking. Three similar sewers intersect the southern bank of the river. The High Level commences at Dulwich, and runs to Deptford Creek; the Middle begins at Clapham, and runs to the same point; the Low Level extends from Putney to Deptford. At Deptford is to be a pumping-station similar to that at Bow, which will raise the water of the south Low Level Sewer to the channel of the High Level, and thence the sewage of the south side will flow through a tunnel 10 feet 6 inches in diameter, to the station at Crossness Point. Two more particulars are especially to be remarked in this plan. One is, that the process of pumping, by which alone the low-lying districts (many of which are considerably below high-water mark) could be drained, has been reduced to a minimum; the other, that the previously existing main sewers are to be made use of as storm overflows for carrying off the surplus water of occasional storms, which the intercepting sewers are not large enough to convey.

Such being the general map of the main drainage plan, we will now attempt to give some idea of the works at the Erith and Barking Stations. At each of these points a huge reservoir is in the course of construction. That at Barking, which is to be the receptacle of the sewage of the northern side, covers fourteen acres, and, when filled, will, it is said, contain forty millions of gallons of sewage. On Monday last between six and seven hundred persons sat down to lunch in this, as yet, unconsecrated temple of the unsavoury goddess. On the south side the reservoir covers five acres. Both receptacles are to be roofed in, and the roofs covered with earth to prevent the escape of malaria. It is impossible to give an adequate description of the forest of piers and arches built of the most beautiful brickwork by which the roofs are to be supported. The great distinction between the works at Erith and Barking is, that at the latter the sewage discharges itself by gravitation alone, whereas at the southern station it is pumped into the reservoir. At Crossness Point it is brought by two enormous culverts from the main tunnel to an eastern and western pumping-station, and is thence pumped through another series of channels into the reservoir. The culverts through which the sewage is to flow into the pumping-wells are each large enough to allow a man on horseback to ride through. Before the sewage reaches the pumping-wells it is strained through an iron door or grating of sufficiently close construction to intercept the coarser refuse, which is to be dredged out by a constantly revolving wheel, fitted with buckets, and to be deposited in a filth chamber, whence it will be flushed into the river at low water, to be carried, we presume, back to London by the returning tide. Each pumping-station or well is constructed at a depth of seventeen feet below low-water mark, and will contain four engines, of 125 horse-power each, which will pump continually into the reservoir. There it is intended that the sewage should be deodorised by lime, and thence a series of channels will convey it into the river, unless its utilisation be resolved upon. Twice in the day at high water the outlets of the reservoir will be opened, and its contents will be allowed to flow through sluices, passing far out in the bed of the river, into the ebbing tide, by which, it is expected, they will be swept thirteen miles further down towards the Nore. With the exception of the arrangements for pumping, the works at Barking are in every respect similar, although on a larger scale.

Whether it will be possible to separate the valuable portion of the enormous body of fluid which will be poured or pumped into these reservoirs has yet to be decided, and it is equally an open question whether, in case the whole is poured into the river, the entire plan may not be a failure, as far as the purification of the Thames is concerned. The effect of the returning tide is to be taken into consideration as well as that of the ebbing, whilst the deprivation of the river for thirteen miles of the rainfall of the vast area of London will not, we may suppose, contribute either to its clearness or its fulness. The simple plan would have been, in the first instance, to have disposed of the sewage proper apart from the rainfall; but, as this has not been done, if the former is to be utilised, a very difficult problem remains for solution. We hear that schemes by various chemists are already before the Board. One of them, by Dr. Thudichum, proposes that the urine, which is by far the most valuable part of the sewage proper, should be collected apart, and never permitted to mix in the general mass. This, however, is certain, that a wholesale waste of the excreta of animal life implies such an entire subversion of the order of Nature, that it cannot fail to result in a permanent deterioration of the soil, and the ultimate impoverishment of its population.

We cannot, however, end this article without pointedly giving expression to the feelings of admiration with which we, in common with every one who has examined the works, regard their surpassing magnificence when considered solely as efforts of engineering skill. The underground tunnels and reservoirs which we have been describing are, we verily believe, destined to rank with the *cloaca maxima* of Tarquin in the history of art. The whole system may be faulty in principle, but in detail it is perfect. We doubt whether some amongst the worthy vestrymen from the East-end who, at the expense of the Board, were on Monday transported over the sable Thames to examine this *opus omnium maximum*, were in a frame of mind to do justice to its merits. To judge by their devotion to bitter beer on the passage, and their strenuous and uproarious exertions at the refection tables, their faculties were rather bent on the refreshment of the inner man than on the intellectual gratification offered by the Board. Still we hope they carried off this moral, that if it were worth while to spend millions in getting rid of the sewage from the Thames within the boundaries of London, it must, *à fortiori*, be desirable to get it thoroughly out of our streets and from the homes of the poor.

THE WEEK.

PARLIAMENTARY.

On Thursday, July 16, in the House of Lords, Earl Granville moved the second reading of the Metropolis Main Drainage Extension Bill. This Bill enables the Metropolitan Board of Works to borrow a further sum of £1,200,000, in consequence of the increase in the price of materials and labour, and the necessity for additional works; and the time for completion of the main drainage works is extended to December 31, 1866.

Earl Fortescue expressed an opinion that the works were enormously expensive, and likely to prove entirely inefficient. He objected both to the pollution of the river and to the dilution of the sewage by its mixture with the rainfall, which would render it unfit for agricultural purposes. The Metropolitan Board of Works were not a municipality, and therefore ought not to assume the character and functions of one.

The Bill was read a second time.

On Friday, Mr. Blake called attention to the defects in the moral treatment of insanity in the great majority of Irish District Lunatic Asylums, and asked whether the Executive Government of Ireland intended taking any and what steps to render those institutions less irksome to the patients and more conducive to their recovery.

Sir Robert Peel, in reply, said that within the last two years a very great improvement had taken place in the management of almost all the asylums in Ireland. A commission was appointed in 1856, when Mr. Horsman was Chief Secretary, and the evidence revealed a total absence of those amusements and recreations which unquestionably tended to produce the best results in the curative treatment of pauper lunatics. Since that time great improvements had been introduced. He would take two cases. In Richmond Asylum it was stated in 1856 that very little arrangement had been made for amusements; but what was the case now? In the report just issued he found this statement, "Great attention is paid to the amusement of the patients." In Dundrum Asylum also amusements were now provided, such as handball, draughts, cards, and an occasional evening dance, when a piper was introduced; newspapers, periodicals, and some books were also provided for those who took an interest in reading. It had been suggested that a series of regulations should be drawn up, to be submitted to the local authorities, pointing out what occupations and amusements tended most to the curative treatment of the lunatic poor, and he would undertake that they should be attended to. The new rules and regulations introduced since he held his present office had on the whole worked satisfactorily. There were now resident Medical superintendents instead of lay superintendents, who had direct charge of the patients in every one of these sixteen institutions in Ireland. The report from each was to be drawn up according to an improved formula. Every institution was to be separately treated, according to regulations given to the superintendent; and there were to be distinct columns for general observations, the number of the patients, the kind of amusements introduced, the dietary, the expenditure, and the cost of maintenance for each of the inmates. A uniform system of bookkeeping had also been introduced into all these institutions, and every attention would be given to have full details as to economy and management. The sanction of the Treasury had been obtained to the enlargement of the Central Asylum at Dundrum. The Board of Works had prepared a plan: a vote of £5800 was taken, with £250 for a Turkish bath, which was calculated to be of immense advantage, and they were endeavouring to establish one in all the great asylums. In addition to this, there were six new asylums, three actually in the course of construction, at Ennis, Castlebar, and Letterkenny, and three others for which the ground was purchased and the plans made, in Down, Monaghan, and Wexford.

On Monday, the attention of the House of Commons was called by Mr. Hume to a statement made by Professor Gamgee in his inaugural address to the members of the New Veterinary College, Edinburgh, in November, 1862, that "pleuro-pneumonia and epizootic aphtha never appeared in Ireland till foreign cattle were imported there;" that "the maladies peculiar to British soil, though often very fatal, never arose above 1 or 1½ per cent. loss, and usually much less; 5, 6, and 10 per cent. are a common yearly average now, and that last year we did not lose in England alone less than three times the amount of cattle we imported; and, if we calculate the loss over the three kingdoms, it will be found that for every animal we purchased from foreign dealers we did not lose less than six or seven of our own."

Sir George Grey, in reply, said that he expected a report from Mr. Gamgee would be presented in a few days.

Mr. Blake asked on what grounds Medical officers of the army were, by a late warrant, precluded from acting as Presidents of Boards of Inquiry, Boards of Survey, and Committees.

The Marquis of Hartington said that the warrant in question was the result of an inquiry by a Commission, of which Sir B. Hawes was the president and Dr. Gibson a member; and the circumstances under which this decision were come to were such that the Medical officers could not, he thought, feel it as a stigma.

The Poisoned Grain Prohibition Bill, which had previously undergone several alterations, was read a third time, and passed.

On Wednesday, Colonel Crichton Stuart asked the Under Secretary of State for War how many men were sent to the Hospital, and whether two men died in consequence of too long exposure to the heat on the occasion of the recent review at Aldershot; and also whether it was intended to provide in the huts at Aldershot one room for each soldier married with leave, more than one family being now lodged in one room.

The Marquis of Hartington said that there had been some exaggeration in regard to what had occurred at Aldershot, and read the following extract from the report of the Inspector-General of Hospitals at Aldershot for the week ending July 17, 1863:—

"There is a slight increase in the ratio of sick to strength. This increase is principally noticeable in the order 'miasmatic' diseases, and is due probably to the unusual heat of the weather, to which, under circumstances of considerable fatigue, the men were exposed at the grand field-day on the 14th inst. On that occasion Sergeant James Casey, 87th Fusiliers, fell dead in the ranks. The post-mortem examination showed valvular disease of the heart of long standing, of which the man had not complained. The above is the only death that occurred on the field-day. The man died on the march to, and not at, the review, and his death is not therefore attributable to length of exposure."

In answer to Colonel Stuart's second question Lord Hartington said that a single room at Aldershot was never occupied by more than one family. There was doubtless, however, great room for improvement, but he reminded the House that it would cost money.

THE MURDER OF A STAFF ASSISTANT-SURGEON IN NEW ZEALAND BY THE TARANAKI NATIVES.

The murder of Staff Assistant-Surgeon, W. A. Hope, M.B., when on military duty with a detachment of the 57th Regiment, by the natives of New Zealand, offers a mournful but striking comment on the absurd fallacy of those who would place the Medical officers of the army in the rank of mere civilians. If exposure to danger in action is the soldier's lot, and constitutes his claim on the respect of society, it is a lot equally shared by the army Surgeon. The *Nelson Examiner*, of May 12, states that the party with whom Dr. Hope was on duty were on their way to New Plymouth from Tetaraimaka. They were shot down by a band of natives without a moment's notice, their bodies were all horribly mutilated, and those of Dr. Hope and Lieutenant Tragett were stripped of nearly all their clothing. Dr. Hope was shot through the right shoulder, the ball penetrated both lungs, and lodged near the spine on the left side. There was a tomahawk wound over the left side of the head, and a deep spear wound through the face and upper jaw. Lieutenant Tragett appears to have died almost instantly, but Dr. Hope must have struggled hard with his assailants. The remains of the officers and men were buried with military honours on May 7; those of Dr. Hope and Mr. Tragett were borne on two Armstrong guns, drawn by eight horses, the colours of the 57th Regiment covering their coffins. They were buried in St. Mary's Church, New Plymouth, side by side with the officers who fell in the war of 1860-61.

FROM ABROAD—THE ROSE-CORYZA—BARON LIEBIG'S ESTIMATE OF LORD BACON—ARTIFICIAL VICHY WATERS—PROSECUTION OF A MAGNETISER AT PARIS—TRANSFUSION IN ANÆMIA—M. VELPEAU AT CONSTANTINOPLE.

All the world has heard of "hay-asthma," and now Dr. Canuti, an Italian Physician, discourses on "rose-coryza." He does not allude to the idiosyncrasy, chiefly met with in hysterical persons, consequent upon which cephalalgia or syncope are produced by the perfume of highly odoriferous flowers, roses among the rest. Dr. Canuti maintains that in gardens in which the rose is specially cultivated an irritating material is produced, so that persons exposed to the exhalations, especially during the height of the flowering, become the subjects of a true coryza. An irritation of, and discharges from, the mucous membrane of the nose, throat, and eyes are produced, which may last for a week or a fortnight. A burning heat, swelling of the eyelids, cough, and a general sense of discomfort, are among the ordinary symptoms, while sometimes even a pustular eruption results. The damask rose is said to be the principal offender. Fortunately, an easy remedy is at hand, inhaling liquid ammonia at the commencement of the attack soon dissipating all symptoms; so that, we suppose, a lady armed with a smelling-salts bottle may still venture into a rose-garden with impunity.

Baron Liebig not long since delivered what may be termed, in the language of the day, a sensation oration before the Munich Academy of Sciences, on the occasion of its 104th anniversary. The chemical doctrines of the worthy Baron, received in this country at one time with too extravagant laudation, have of late years fallen to a serious discount, especially in the agricultural world; and as he feels somewhat sore on this point, he probably is not sorry of the opportunity of giving John Bull a serious thrust in a part so sensitive as the reputation of one of his great luminaries. An estimate of the scientific deserts of Lord Bacon formed the subject of the discourse in question; and although we have not yet had an opportunity of reading the oration *in extenso*, we cannot forbear acquainting our readers with the astounding conclusion which a careful and critical study of the works of the great Chancellor has led the celebrated chemical philosopher to arrive at. The great services, then, hitherto supposed to have been rendered by Bacon to science, and especially to natural science, have, in point of fact, no existence; and although these have been recorded by so many writers and biographers, an impartial criticism proves them to be a mere frivolous deception. With a ruthless hand the orator overthrew the image of this so-called great restorer of science, whose name has for three centuries shone as a guiding star, indicating the right path and true aim in the pursuits of science. He is no originator of the inductive method, which was known, and had been profitably employed, long before the time of Bacon. The true scientific method had been predicated by Aristotle, while that developed by Bacon in his "Novum Organum" in nowise serves as a practicable means in the pursuits of science. The orator culled from Bacon's writings a number of ridiculous and laughable explanations of occurrences in Nature, which are sufficient to stigmatise him as an unscientific charlatan who approached Nature with falsehood in his heart, and in whose writings truth is never sought as the aim of science. Bacon exhibited the same character in science as in his life, which the lecturer illustrated by his work, "Historia Vitæ et Mortis," in which the author, evidently for the sake of pleasing his high patron, James I., sought to accommodate the rules for attaining longevity to his habits of life, thus preparing a difficult task for the celebrated Harvey, the King's body-Physician.

M. Guillot has called the attention of the Paris Hospital Medical Society to the fact that the artificial Vichy waters prepared by congelation may now be had at a price which will admit of their general use in Medicine. If not identical with the Vichy waters in composition, they are at all events a very great improvement upon the artificial waters hitherto in use. The concentration of mineral waters by means of heat induces reactions amongst the salts which are held in solution that entirely change their relations. The action of cold, on the other hand, impedes and diminishes the chemical affinities; the ice which is formed is constituted of water nearly chemically pure, while the salts of the mother liquor remain in a condition of greater concentration, but without any probable alteration in their composition.

An amusing quack was brought before the Paris Correctional Police a few days ago, in the person of one Emilie Gire, the founder of the "Paris Magnetic Academy." A lady, seventy years of age, was seized with what the magnetiser calls "apolpelxie," and her ordinary attendant not succeeding in restoring her health so rapidly as was desired, he was dismissed, and Gire was called in. He attended the lady until her death, and received 80 francs for fifteen "electrisation visits." As a second and fatal attack of apoplexy seemed to have been induced by his unskilful use of electricity, it was at first intended to indict Gire for homicide through imprudence; but eventually he was proceeded against for the lesser offence of illegally practising Medicine and Pharmacy. He appeared smiling before the tribunal, and when questioned as to the signing the initials P.D.M. after his prescriptions, and placing them on his door-plate, he replied that an unfortunate error had arisen in this matter, for he did not intend by these to characterise himself as a Paris Doctor of Medicine, but P Professeur, D de, M Magnetisme. As to the charge of an illegal practice of Pharmacy, he did not sell, but gave his drugs. The maximum penalty of 500 francs (£20) was inflicted.

An interesting case has occurred in the wards of Dr. Braun, the eminent Professor of Midwifery at the Vienna Faculty, and which is described in the *Wien Wochenschrift*, No. 21. It consists in the application of transfusion for the relief of anæmia consequent on repeated attacks of uterine hæmorrhage. The woman, 45 years of age, had a miscarriage in August, 1862, and from that time to April, 1863, suffered from occasional severe metrorrhagia, which at last brought on the extremest anæmia, so that her life became in the most imminent danger, not from the continuance of the hæmorrhage, but from her anæmic condition. Dr. Braun therefore resolved to employ transfusion. The result was surprising, for scarcely had an ounce of blood been thrown in when the patient, who had been before in the extremest exhaustion, recovered some of her colour, and declared herself better; the pulse, which had been thread-like, being now full and strong. The improvement continued, her appetite, which had entirely ceased becoming even large. The transfusion was performed on the 22nd of April, and by the 1st of May she might be considered as well.

M. Velpeau, the celebrated Paris Surgeon, has just set off for Constantinople. His visit is said to be occasioned by the determination of the Sultan to establish Medical Schools in Turkey upon a broad basis.

REVIEWS.

Report of the Royal Commissioners on the Sanitary State of the Army in India. Blue Book, 1863.

This Report consists of two thick volumes. The first volume, of 943 pages, contains the Report of the Commissioners; a *précis* of the evidence taken before them; the evidence itself; observations by Miss Nightingale on the stational returns; abstracts by Dr. Sutherland of the stational returns; addenda to evidence; miscellaneous tables and statistical returns, and a report on the meteorology of India by Mr. Glaisher. The second volume contains the stational returns and reports from India in full, and, like the first volume, consists of nearly 1000 pages. The whole forms a work unrivalled, even by the celebrated Report of the Sanitary Army Commission, for fulness of detail and accuracy of information on all points connected with the health of the European, and to a less extent of the native army and Indian population.

A small octavo volume has been also issued containing merely the report and the *précis* of the evidence. This plan was proposed by Lord Stanley, as the immense size of the two volumes would have deterred many from ever looking into them, and it is of importance that the knowledge of the condition of the Indian Army should be widely spread. We regret, however, that Miss Nightingale's observations on the stational returns has not been included in this thin volume; it is a vigorous and telling summary of the sanitary deficiencies of India, and is likely to produce a greater impression than even the Commissioners' report.

The result of the whole work is to show, what was indeed well known before, that, on a long term of years, the mortality of European soldiers in India is very large, being no less than 69 per 1000 per annum, instead of 10 as at home, or 20, as in Jamaica, in 1860. But few persons will be prepared for the result of Dr. Farr's calculation of the expectation of life of a young soldier of 20 on landing in India. It is only 17·7 years; whereas if the man had remained in England, his probable life would have been 39½ years. This is the true test of the influences acting adversely on health. During the present century the mortality has declined, but not regularly.

In the last year of which we have any complete returns of the Queen's troops, viz., in 1860, the mortality was 53·21 per 1000. The frequent wars in India have comparatively little effect on this mortality, so slight in reality are the destroying powers of the sword in comparison with the ever-acting agents of disease.

The mortality of the officers has always been much less, being on an average only 38 per 1000. On the whole, though the Commissioners appear to doubt it, it is possible that the mortality is gradually decreasing, and in a greater ratio than the sickness,—a fact attributable probably to the more skilful treatment of disease. In Bengal, 84 men of 1000 Europeans are constantly in hospital, and if this is taken to be the case in the other Presidencies, and if the whole army number 70,000 men, 5880 beds are constantly full, and 4830 men die annually. Including every item, each European soldier costs £100 annually. Some of the large barracks lately built are so expensive, that the accommodation for 10 men costs £131 per annum. The Commissioners calculate that if 5880 men are constantly sick, and if this sickness could be removed, the army might be reduced by that number, and £588,000 would be saved, or, allowing £200,000 for inevitable sickness, £388,000 would be saved annually.

Having gone at great length into the questions connected with the amount of mortality and sickness, the Report discusses the causes, and reviews in order the influences of climate, duties, passage out, sanitary condition of stations, towns and bazaars, drainage of stations, irrigation, water supply, construction of barracks, ventilation of barracks, space per man, and means of cooling air in barracks, ablution and bath accommodation, latrines and urinals, tents, diet, dress, intemperance, venereal disease, idleness, and ennui.

They show that almost everywhere the sanitary condition of the soldier is bad, and that, apart altogether from climate and malaria, there are abundant local causes of disease sufficient to account for the great sickness and mortality. On the grand question of hill stations, the Commissioners appear to us to speak with more reserve than is necessary. They recommend, indeed, that one-third of the force be located there, but they do not insist strongly enough on the fact that this plan is really and truly the only means by which this country can permanently hold India. No doubt at some hill stations there are disadvantages, but the Commissioners overrate these. What is now wanted is some great soldier (who is, as every truly great soldier must be, profoundly impressed with the fact that his first care is to keep his men healthy), who may select the strategical points which must be held in India.

Then, for these vital points of our Empire, if in unhealthy places, let every provision be made. Let engineering skill make them impregnable—capable of defence with the smallest number of men, and yet able to accommodate as many as may be necessary in case of assault or siege; let sanitary science then do its best to make these places as healthy as they can be; and then, all this being done in the best way, all indispensable military posts being secured, but not one in excess, pick out the healthy mountain spots in India, and make them the great camps whence at any moment, along good roads and railroads, an army of healthy, powerful men may descend to crush insurrection or to intimidate faction. The number fixed by the Commission, viz., one-third, to be located on the hills seems to us too small, and in fact it is premature to name any number; that must depend on the military exigencies of the plains.

In addition to the location of one-third of the force in the hills, the Commissioners recommend that the term of service be reduced ten years. This is a bold suggestion, and if it can be carried out may be productive of great good. It is based on the fact that mortality increases with length of service, and that there is no evidence of anything like acclimatisation. They also recommend the establishment of Health Commissions in the three Presidencies, in connexion with a permanent Commission in this country, and it is evidently intended that these officers shall deal with the wide question of disease among the civil as well as among the military population.

The other suggestions of the Report refer merely to obvious sanitary arrangements, and commend themselves at once by their sense and evident necessity.

In dealing with this voluminous Report we have necessarily referred chiefly to the statements of the Commissioners, but there are many other parts well worthy of careful reading. The evidence of many of the witnesses is in the highest degree interesting and instructive. Dr. Farr's statistical tables are of great value, and Mr. Glaisher's meteorological report gives an excellent account of the chief climatic conditions of almost every station.

Miss Nightingale's trenchant criticism will no doubt be eagerly read, and probably variously commented on. If some may be disposed to think its statements too highly coloured, they must remember that it is simply a truthful commentary on the stational reports, all of which are given. Certainly Miss Nightingale has spared no errors, and has lashed shortcomings and neglect unsparingly. But how otherwise could the work be done? How otherwise is the oppressive inertia of routine to be roused into activity, and driven out of the well-worn grooves into fresher paths? If anything can sting Indian officials into action it will be the picture which Miss Nightingale has traced with so keen and sharp a pen.

We commend this Report to all our readers, and we beg those who have influence with the great political chiefs to use their best efforts to get the suggestions of the Commission carried out. Our Profession can thus aid largely in this great work, and can thus influence, it may be, the lives and well-being of nearly one-sixth of the inhabitants of the globe.

Anatomical and Physiological Observations. (Continued.) By Dr. John Struthers. Edinburgh: 1863.

In this Number of his contributions to Anatomy and Physiology, Dr. John Struthers has included four very interesting and important essays. With the first we have been familiar for some time. It contains the results of some carefully-performed and ingeniously-contrived experiments on the veins of the root of the neck, from which Dr. Struthers infers, 1st. That it is generally possible to disgorge the right side of the heart by jugular venesection; and 2nd, that there is every reason to believe that jugular venesection will prove a useful means in resuscitation. He recommends jugular venesection to be performed *as early as possible* . . . an inch above the clavicle; that the veins be simply allowed to disgorge themselves; and as soon as the active flow ceases, not waiting too long, the wound to be closed and artificial respiration immediately commenced.

Immediate closure of the wound is rendered doubly desirable at the root of the neck where the veins do not collapse so easily as elsewhere, and where during inspiration that terrible accident, entrance of air, is liable to occur.

In his next paper, Dr. Struthers discusses the mechanism of the hip-joint, with especial reference to the round ligament. Not satisfied in his own mind with the explanations offered by Barclay, Mayo, Knox, or the two Webers, this accurate anatomist made independent investigations.

Assisted by the Diable Boiteux of dissecting-room ingenuity, he looked through the roof of the house, and saw the round ligament loose, round and pulpy in all positions, except during ROTATION *outwards* with *flexion*, and that its obvious use "is to prevent, or assist in preventing, dislocation in the forward and outward direction."

Passing over a "description of a case of double uterus," we come to a learned and curious paper on the solid-hoofed pig. This race of swine, mentioned by Blumenbach, and said to exist in some parts of England by Pritchard, is represented in the College of Surgeons of Edinburgh by a skeleton of one given by Sir Neil Menzies, of Rannoch, Perthshire, in 1839. They throve in that neighbourhood, and multiplied. The good Presbyterians disapproved of them; they were pigs, as it were, that were accursed, and yet not with the curse of Ham, though they were all black.

The Highlanders—their ideas of pork chops obscured by a muddled sauce of half-read scripture—could not reconcile themselves to pigs which "did not divide the hoof." Had they looked at Deut., chap. xiv., they would have found that the Jew may not indulge in pork, however the pig may comport himself to his "poor feet."

It is sad to read that real Presbyterian swine, roaming on the heathery hill sides, so far forgot themselves as to consort with the porkers of the enemy, and that hundreds of these solidungulous "deevils" grunted and grubbed for many years, but "the *numbers diminished.* We will not even suggest where pork might, for the sake of the crackling, have been popular just then," says our author darkly. "The *cause* is not apparent." We would, however, like to hear what the Men of Rannoch side said, as one by one these graceless swine mysteriously vanished, until last year but one remained: poor, solitary sinner,—a *boar* in every sense; he has since . . . "And *now*," says the Doctor with a sigh, "the solid-hoofed breed appears to be extinct at Rannoch."

This is a touching tale. The little colony of swine, victims to the religion of their new country, disappears, and the skeleton of but one remains to afford material for the speculations of a philosophic anatomist.

The next paper is intended to prove that "the right side of the body is considerably heavier than the left." So be it; we have not time or space to discuss the question in an even-sided manner. And the last paper, on superfluities in fingers and toes, is so entertaining and instructive our readers better get it from the original text.

These papers by Dr. Struthers are something more than the consolations of study a busy man of science now and then indulges in; they are the results of patient training of a mind naturally accurate, and which sees, in what are commonly called "freaks of Nature," some signs of that one purpose that pervades the great argument.

FOREIGN CORRESPONDENCE.

◆

GERMANY.

VIENNA, June.

THE most able Clinical Teacher of this University is Professor Oppolzer, a Bohemian by birth, and, previous to his appointment here, Professor of Clinical Medicine first at Prague, and afterwards at Leipsic. Although he has published only a few papers, and no big book, his name is known all over the Continent, both as an accomplished Physician and one of the best teachers that can be well imagined. He is of special importance to this University, on account of the scepticism with regard to therapeutics which holds sway over the minds of many others of our Professors, especially over that of the great "chestman," Skoda. I heard Professor Oppolzer lately make some remarks on the treatment of uræmia and its symptoms which may be worth communicating to your readers. As regards the eclamptic fits, he believes that inhalations of chloroform are best able to diminish their duration and intensity. In the free intervals, jalap or saline purgatives should be administered. Calomel ought not to be given, as the Professor has seen extensive gangrene of the gums after its use in uræmic patients, with consequent rapidly fatal result. Sinapisms and blisters are also dangerous, as they easily cause gangrene of the skin. For the comatose condition of these persons, cold affusions on the head, and the internal use of ammon. succin. are chiefly to be recommended. Others are in the habit of prescribing carbonate of ammonia, and your correspondent himself has under such circumstances given it in five-grain doses every hour, with the best results. But how is this fact to be reconciled with Frerichs' views on the causation of uræmia by the evolution of carbonate of ammonia in the blood?

Frerichs' views on uræmia have, indeed, had a peculiar fate. They were, within a very short time, almost universally received by the Medical Profession, and yet, since they were first made known, only one paper has appeared in which their correctness was confirmed from experiments performed in a judicious manner. On the other hand, scarcely a year has elapsed in which this theory was not most violently assailed, and experiments were given to the world which showed that Frerichs must be wrong. The idea that urea was decomposed in the blood under the influence of an unknown ferment, was chiefly contended against; and it is true that this unknown ferment very much resembles the *deus ex machinâ* of certain old tragic poets. Professor Treitz, of Prague, endeavoured to fill up this hiatus. He asserted that the decomposition of urea did not take place in the blood itself, but in the effusions within the intestinal tube which contained this matter; that the carbonate of ammonia there produced was again absorbed, whereupon the blood became overcharged with it, and symptoms of uræmia were the natural consequence. But even this assertion was soon afterwards contradicted, and experiments were adduced to show that there was no carbonate of ammonia in the blood of animals who had become uræmic after the removal of their kidneys.

It is true that, according to the researches of Drs. Richardson and Hammond, there is a small quantity of ammonia in the expired air and the blood of healthy dogs; but this was not found to be increased after uræmia had been artificially produced by nephrotomy; on the contrary, there was three or four times the quantity of urea there had been before. It was therefore concluded that, since injections of urea likewise produce convulsions, we should have to go back to the old view, viz., that it was the retention of urea alone, or combined with other constituents of the urine, which caused uræmia. On the other hand, however, we have to consider that the presence of ammonia had only been qualitatively determined, so that the statements about more or less ammonia were devoid of value; that injections of urea only cause convulsions if large quantities of this substance are rapidly injected; and finally, that in Bright's disease there may be a considerable amount of urea in the blood, and yet no convulsions take place. Thus, for instance, Dr. Owen Rees has recorded a case where the patient remained conscious until the last moment of his life, and yet his blood contained more urea than that Physician had found in any other case of Bright's disease that had fallen under his notice.

Another explanation of the causation of uræmia was recently given by Dr. Oppler, who experimented upon dogs rendered uræmic by nephrotomy, or ligature of the ureters. He found that after such an operation the quantity not only of urea, but also of the extractive matter of the blood, was considerably increased, and that the muscles contained more leucine and creatine than under ordinary circumstances. From this he concluded that uræmic poisoning was caused by the accumulation of products of decomposition of nitrogenous matter within the centres of the nervous system. A series of experiments led him likewise to attack Frerichs' statement, that injections of carbonate of ammonia produced the group of symptoms observed in uræmia. After such injections he merely observed phenomena of irritation, especially convulsions, which, if they did not cause immediate death, disappeared rapidly, and without any further consequences, but were never followed by a comatose condition.

I may still mention the experiments by Dr. Petroff, who asserts, that if previous observers did not find any ammonia in the blood, this was due to a deficient method of investigation having been pursued. This gentleman has, indeed, shown that saturated acetate of ammonia is volatile, and that it had been caused to evaporate, if the blood was first mixed with alcohol, in order to prevent the decomposition of urea, and then heated. He further proved that there was a large amount of ammonia in the blood of dogs the kidneys of which had been removed, and that if there was more ammonia, symptoms of uræmia began to set in. He has likewise found urea in the blood, but does not state the quantity discovered before and after uræmia had commenced. He endeavoured to remove the objection made by Dr. Oppler with regard to the injection of ammonia, and proved that, if the symptoms observed after that disappeared rapidly, and were more of an irritative character, this was merely due to the rapid elimination of that substance through the kidneys, but that there was deep coma after the convulsions if the ureters were tied, or the kidneys removed. He therefore approved in every particular of Frerichs' views, which thus seem to stand firm against all assailants.

GENERAL CORRESPONDENCE.

◆

RE-VACCINATION DANGEROUS!

LETTER FROM DR. MILLER.

[To the Editor of the Medical Times and Gazette.]

SIR,—Allow me to reply to Mr. Kesteven's strictures upon my former letter on the dangers of re-vaccination; and in doing so to thank both you and him for the ventilation you have given to the subject.

Mr Kesteven says, "I unconsciously vaccinated two persons in whom the small-pox was incubating, the third was accidentally vaccinated in a similar condition." I am free to confess that my opinion was given to that effect as regards the two first cases, but it was materially altered by the third. Here was a case of small-pox arising sporadically from no known cause save the re-vaccination. The patient was a lady in the upper class of life, who had been in the enjoyment of perfect health from her accouchement to the date of her illness, and was surrounded by friends who would have anxiously recognised any indisposition, but not the slightest symptom was present until this misadventure. Her husband watched her most tenderly, the nurse was most indefatigable, her friends were constantly about her, but the disease was communicated to no one; hers was the solitary case of the time; and yet Mr. Kesteven maintains that she was incubating small-pox when re-vaccinated, just because the period of incubation did not correspond with the written and theoretical law of development of the disease! Can anything be more fallacious?

It is impossible to say how far the other two were under the influence of small-pox at the moment of vaccination; my belief now is, that they were not. One of them was a celebrated belle of Calcutta, in perfect health apparently when re-vaccinated, and the other a lady in comfortable circumstances and equally good health. I allude to their positions in life for these reasons—1. That their habits were not likely to throw them in contact unwittingly with the disease; and 2, that if they had imbibed the varioloid poison, it is certain that some malaise must have ensued, which they would most assuredly have shown. If we are to admit that the poison of small-pox was in the system when vaccine lymph was introduced, what becomes of the protective power of re-vaccination? Why did it not arrest or modify these attacks of small-pox, especially, as Mr. Kesteven says, "it is so powerful in arresting the epidemics of variola?"

Since my former letter I have sought the opinion of several Medical brethren on this subject. Some of them are very averse to re-vaccination, because of the untoward consequences, such as phlegmonous inflammation of the arm, and axillary abscesses; while others are doubtful of its efficacy. As for myself, after the experiments of Mr. Ceely, which have proved the identity of vaccinia and variola, and the history of the cases I have recorded, together with many similar ones which I know have occurred to my Medical friends in India, I think there is much reason to believe that there are conditions of the human system (especially in the tropics) in which the vaccine lymph can excite genuine small-pox.

Sir, how often has it been remarked, that if every Practitioner would only jot down for the information of his brethren the peculiar diseases and types of disease which he has encountered, what a mass of information would arise! It was with this view that I penned my first letter; but I little thought that any Practitioner would base an argument on the discrepancy of the stage of incubation. Let me ask Mr. Kesteven, whether he always meets in practice with typical cases of disease, and whether the period of incubation in the exanthemata and other fevers is always regular?

I am, &c. J. W. M. Miller, M.D.

Gloucester House, Southsea, July 14.

OPERATING DAY AT KING'S COLLEGE HOSPITAL.

[To the Editor of the Medical Times and Gazette.]

Sir,—I was in London the other day, and went to a well-known Hospital to see the operations. Allow me briefly to describe the scene to you, and to say that I believe the blame, in a great measure, rests not with the kind and courteous Medical and Surgical staff of the institution, but with visitors who, like myself, allow curiosity to trample down their good manners. I was ushered into the area of a large theatre. In the rows were about a hundred students; in the area a number of persons talking, moving to and fro, sitting in groups, and apparently killing time. But, sir, "time" was not the only one operated upon, for in walked a man requiring a tumour removed. The buzz of conversation ceased for a few seconds. Perhaps the most eminent operator of his day did something to the patient. I conclude he did, for I saw two legs, which I took for granted belonged to the latter, waving at times in the air. Again the talk begins. One gentleman, in a white tie, sides with the Confederate States of America, to the annoyance of another, who emphasises his words with the ferrule of an umbrella on the floor. A few *bon mots* are passed round, and the consequent laughter does not assist in anæsthetising a patient whom a well-known Surgeon is about to operate on for aneurism. A rush is made to the table. I am too late, being slightly lame, and share for a few minutes a chair with another spectator. The students, who, I must say, behave with the greatest forbearance, now open books and newspapers, because all round the table are heads. Not being able to see anything but heads, I amused myself by counting them. When I came to thirty, a person asked me something about the Eton and Harrow match, and I lost my reckoning. How the Surgeon, pressed upon on all sides, did the operation so deftly, as I afterwards heard he did, beats me. I have done a few things of the kind in my time, but never with my arms pinned to my body, light and air excluded, hot colleagues snorting in my face, admiring friends leaning on my patient's stomach. By the way, he, poor fellow, got rather faint, and that is the worst of chloroform, people are so apt to be suffocated if, during anæsthesia, a number of adults press with all their weight on the thorax and abdomen.

After each operation, the operator kindly endeavoured to explain the why and how of his proceedings. And he did so, but as some people were talking so loudly about Professor Pepper's ghost just at my side, I do not know now why the artery was tied. I presume for aneurism, but the Surgeon I asked answered, "for the heat of the weather." Now, to be serious, is this decent; is it right, when a poor fellow-creature is undergoing what will be life or death to him, to chatter as people do at ordinary social gatherings? No. Is it fair to the students who pay to see? No. Is it respectful to the operating Surgeons? Certainly not. Then, my dearly beloved brethren, why in the name of absurdity do you, Saturday after Saturday, do so? You know you do. And you did so at King's College Hospital last Saturday, did you not?

I am, &c. Rusticus.

DR. KRAMER'S AURAL SURGERY.

Letter from Dr. William Kramer.

[To the Editor of the Medical Times and Gazette.]

Sir,—The review of my "Aural Surgery of the Present Day," published in your much esteemed Journal (July 11), contains so very severe attacks upon me as an author, that I trust an appeal to your sense of justice will not be in vain, and you will be kind enough to give room in your next Number to a few words in my defence.

The reviewer is of opinion that my "Aural Surgery," for want of "scientific observations," never ought to have been translated; an opinion which, being expressed without proofs, is a mere assertion, and requires therefore no refutation on my part.

I have given up, it is true, the prevalence of "Nervous Deafness" in my system of "Diseases of the Ear," and replaced it by an almost equal prevalence of submucous exudation in the middle ear. But this I was compelled to do, in consequence of the very minute examination of it by means of four ear-catheters, and of elastic bougies, both gradually increasing in calibre, and properly combined with the use of an elastic-diagnostic tube (see my "Aural Surgery," page 26, 30-32). Every impartial reader will agree with me that submucous exudation in the middle ear is proved, if air, blown into the Eustachian tube, does not reach the drum at all, or only if blown through catheters of the largest calibre. Still more unmistakably its existence is proved if the Eustachian tube is not pervious to india-rubber bougies at all, or only to such ones of the smallest calibre, instead of being pervious to a bougie one millimetre in calibre.

These diagnostic resources the reviewer left entirely unnoticed, and thus he deprived himself of the only means of judging impartially of the validity of my reasons for recognising the prevalence of submucous exudation in the middle ear as a pathological fact.

With regard to the large variety of lesions within the tympanum and labyrinth, as demonstrable causes of deafness (thanks chiefly to the labours of one man), I think I have proved at large on two former occasions (see *Medical Times and Gazette*, October, 16, 1852, and June 26, 1858) their very little scientific value, or rather no value at all. Allow me therefore on this occasion only briefly to repeat, that this "one man" did not examine during lifetime a single one of the cases he dissected. He did not, nor could he, of course, diagnosticate during lifetime the much praised lesions in the tympanum, nor ascertain their connexion with deafness, nor confirm by dissection their diagnosis, which he never attempted.

The reviewer thinks that the inspection of the membrana tympani and of the throat, the history, the effect produced by inflation of the tympanum on the patient's part, are sufficient to inform us, in the vast majority of cases, when we have a thickened mucous membrane to deal with; but I, on the contrary, am proud of having clearly shown in my "Aural Surgery" that these diagnostic symptoms of diseases of the middle ear are of a quite fallacious and merely conjectural character. I am, &c.

William Kramer, M.D.

22, Berners-street, Oxford-street, W., July 21.

LEGAL INTELLIGENCE.

◆

MIDLAND CIRCUIT.—July 18.

(*Before Mr. Justice* Williams *and a Special Jury.*)

BROWN V. EDWARDS.

This was an action of slander, to which the defendant pleaded that he was "Not Guilty."

Mr. Serjeant Hayes and Mr. Flowers appeared for the plaintiff; Mr. Macaulay, Q.C., and Mr. Mundell for the defendant.

The parties to this action are both members of the Medical Profession, and reside at Uppingham. The plaintiff, who is the son of a well-known solicitor practising there, had lately passed his examination at the College of Surgeons, but at the time when the alleged slander was uttered had not been registered under the late Medical Act, and was not an Apothecary. There is in Uppingham a Friendly Society, calling itself the Artisans' Benefit Society, of which the defendant had for some years been the Medical officer. About the end of last year some of the members having become dissatisfied with the defendant, waited upon the plaintiff, and asked if he would consent to become their Medical officer, to which he replied he should have no objection to act as such if elected. The meeting for the annual election of officers took place on the 5th of January in this year, when the defendant was present. One of the members proposed the plaintiff as their Medical officer, upon which the defendant got up and said that the plaintiff could not be proposed because he had not sent in a written statement of his qualifications, as required by the rules. The chairman, who appears to have favoured the plaintiff, replied, "Why you yourself, Mr. Edwards, have not sent in any written statement. Moreover, you are not a member of the Society, and cannot interfere in the discussion." The defendant became excited, and said the plaintiff had no wish to become their officer; to which several of the members replied that they had seen him, and that he had no objection to act, if elected. The defendant thereupon said, "Mr. Brown is not legally a doctor. I can stop him at any time. He is here by my sufferance, and if he interferes with my practice I can send him out of the town, as I did Mr. Walker." This was the slander complained of, the result being that the defendant was re-elected. The plaintiff's father had written to the defendant to complain of this statement; but the defendant had declined either to retract or to apologise for it unless the plaintiff would state that he was a member of the Apothecaries' Company, and a duly qualified general Practitioner. To this the plaintiff's father replied that his son was not, and perhaps did not intend to become a certified vendor of physic; and the defendant persisting in his refusal to retract or apologise this action was commenced.

At the close of the plaintiff's evidence,

Mr. Macaulay submitted that he had failed to establish his case. The declaration by its inuendoes charged the defendant with saying of the plaintiff that he was not a duly qualified Surgeon and Accoucheur, while what he had said was in effect that, being only a Surgeon, he was not qualified to become the Medical officer of a society where he would have to attend both Surgical and Medical cases, which by law he could not do.

Mr. Serjeant Hayes contended that the useless and unnecessary inuendoes could be rejected and the declaration amended; but this

The learned Judge refused, on the ground that, if the declaration were amended in that respect, and the wider interpretation put upon it, the defendant might be able to justify and prove the truth of the alleged slander. His lordship thought that some light might be thrown upon the defendant's meaning by ascertaining the reasons for which the defendant had compelled Mr. Walker to leave the town.

Mr. Macaulay thereupon called a witness, who proved that Mr. Walker had been compelled to give up practising at Uppingham because he was only a Surgeon, and not a member of the Apothecaries' Company.

The jury found a verdict for the defendant.

There was a second action between the same parties, complaining of a repetition of the alleged slander after the plaintiff had registered under the Medical Act, but it was not proceeded with.

MEDICAL NEWS.

◆

Royal College of Physicians of London.—At a general meeting of the Fellows, held on Monday, July 20, 1863, the following Members of the College were admitted into the Fellowship:—

John Hall Davis, M.D. Lond., 11, Harley-street; John Burdon Sanderson, M.D. Edin., 9, Gloucester-place, Hyde-park; George Nelson Edwards, M.D. Cantab., 1, Finsbury-square; William Henry Stone, M.B. Oxon., 13, Vigo-street, Regent-street; Francis Harris, M.D. Cantab., 24, Cavendish-square; John Meyer, M.D. Heidelberg, Broadmoor, Wokingham; Frank Chance, M.B. Cantab., 51, Wimpole-street; William Charles Hood, M.D. St. Andrews, Croydon; Richard Budd, M.D. Edin., Barnstaple.

At the same meeting, the following gentlemen, having undergone the necessary Examination, and satisfied the College of their proficiency in the Science and Practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

Adolphe Wahltuch, M.D. Kieff, Chatham, Manchester; Philip Hauser, M.D. Berne, Gibraltar; John Ruddle Milsome, M.D. St. Andrews, St. Bartholomew's Hospital; Gustav Rudolph Walthardt, Queensland; William Thursfield, M.D. Aberd., Bridgenorth; John Brown, Oldbury, Birmingham; Gorrequer Griffith, 17, Stanley-terrace, Notting-hill; Matthew Trevan, Port Isaac, Cornwall; Shephard Thomas Taylor, Dilham, Norfolk; Edward Whitfeld Thurston, Ashford, Kent; Henry Law Kempthorne, King's College Hospital; Frederick Long, East Dereham, Norfolk; Aaron George Medwin, Blackheath-road; Septimus Terry, 21, Cambridge-street, Pimlico; Elijah Baxter, Forman, Derby.

Also, at this meeting, the following gentlemen were reported by the Examiners to have passed the First Part of the Professional Examination for the Licence of the College:—

Paulin Martin, William George Vawdry Lush, Thomas Robinson Glynn, George Christopher Tayler, Walter Anstice Harvey, Alexander Hampton Brewer, Thomas Annetriding Compton, Henry Melville Brewer, John Tasker Evans, and Vincent Frederick Eck, of St. Bartholomew's Hospital; George Eastes, Marmaduke John Mayou, Charles James Wright, Francis Thomas Tayler, George Paddon, George Henry Savage, Henry Todd Broughton, Charles Smith, Olliver Thomas Duke, Arthur Taylor, and Ebenezer Fulham Turner, of Guy's Hospital; Edward Liveing Fenn and Miles Astman Wood, of King's College; John Cavafy and Edward Forster Brockman, of St. George's Hospital; George Elkington, jun., Sydenham College, Birmingham; George Clements, Middlesex Hospital; George Jackson, University College.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, July 16, 1863:—

Thomas Jackson, Whitehaven; Henry Crewe Boutflower, Manchester; Charles Ethridge, Stoke Ferry, Norfolk; Arthur Newman Turner, Bermondsey-square; Charles Spurway, Tiverton, Devon; Vivian Wearne, Heltston, Cornwall.

As an Assistant:—

Thomas John Burroughs, Union-street, Southwark.

The following gentlemen also on the same day passed their First Examination:—

Joseph Morris, Anderson's University, Glasgow; Bryan Holmes Allen, James John Coxeter, and Philips Brookes Mason, University College; George Clements, and Henry Wm. Freeman, Middlesex Hospital; Edward Peter Shorland, Guy's Hospital; Alexander Hampton Brewer, Henry Melvill Brewer, and Charles Thomas Dalley, St. Bartholomew's Hospital.

N.B.—The Court of Examiners will meet on Tuesday, the 28th July, instead of Thursday, 30th; on which day there will be no examination at the Hall.—By order of the Court of Examiners, Alfred M. Randall, Secretary.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Bramley, W. S., M.D., has been appointed Assistant Resident Medical Officer to the Leeds Public Dispensary.

Bright, John Meaburn, M.D., has been elected Assistant-Surgeon to the Hospital for Women, Soho-square.

Buchanan, Washbourn, M.D. Lond., has been elected President of the Gloucestershire Medical and Surgical Association.

Dunn, Mr. R. William, M.R.C.S. Eng., has been appointed Vaccinator to King's College Hospital.

HAYWARD, HENRY H., M.R.C.S. Eng., has been elected Dental Surgeon to the Hospital for Consumption and Diseases of the Chest, Brompton.

JERVIS, THOMAS, M.D., has been appointed a Justice of the Peace for the County of Middlesex, and for the City and Liberty of Westminster.

KEMM, WILLIAM, M.R.C.S., Eng., has been appointed Visiting Surgeon to the Kingsdown Lunatic Asylum, Box, Wilts.

MOXON, WILLIAM, M.R.C.S. Eng., has been elected Surgeon to the Royal Victoria Dispensary, Northampton.

RYLE, G. H., L.S.A., has been appointed Dispenser to St. Bartholomew's Hospital, Chatham.

SHEA, HENRY G., M.R.C.S. Eng., has been appointed House-Surgeon to St. Bartholomew's Hospital, Chatham.

DEATHS.

ASHTON, THOMAS, L.F.P.S. Glasg., at Appleton Widnes, Lancashire, on July 12, aged 48.

CARTER, HARRY WM., M.D. Oxon., J.P., at Kennington Hall, Ashford, Kent, on July 16, aged 76.

CLOSE, ANTHONY W., F.R.C.S. Eng., at Sale, near Manchester, on July 7.

ILES, ALBERT, M.D. St. And., at Croft House, Fairford, Gloucestershire, on July 12, aged 42.

IRWIN, JOHN, M.R.C.S. Eng. at Whitehaven, Cumberland, on July 6, aged 29.

MAY, JAMES H., M.D. Edin., at Summerlands, Exeter, on June 28, aged 39.

MORGAN, J. G. M.D., Loches, near Tours, France, on July 1, aged 79, formerly Physician to the North Devon Infirmary.

ROBERTS, T. L, M.R.C.S. Eng., at College Green, Towyn, on July 3, aged 30.

SPARROW, GEORGE W. PENNINGTON, L.R.C.P. Edin., Surgeon 3rd Battalion H.M. 60th Rifles, at Theyat Myo, Burmah, E.I., on May 1, aged 42.

THOMPSON, WILLIAM, M.D. Aberd., at Tyne Croft, Gosforth, Cumberland, on July 7, aged 36.

WEDDERBURN, JAMES, at 39, Craven-street, Strand, on July 17, aged 48.

THE EPSOM COLLEGE.—The Founder's Day was held on Wednesday, the 22nd, and the whole proceedings must have been highly gratifying to the numerous friends assembled. The organization of the school has made great progress, and since our last visit a new wing and a more capacious and architecturally-imposing school-room have been added. The education provided is of the very highest class, and the health and muscular development of the scholars promoted by outdoor amusements, drilling, and gymnastic exercises on an extensive, and, as far as we could judge, complete scale. The proficiency and advancement of the boys were tested by speeches and recitations, and the prizes were awarded with much tact and eloquence by the noble President, Lord Chelmsford. This part of the day's programme was especially interesting to the boys, their parents and friends present, and scarcely less so to the general company. Mutual congratulations seemed the order of the day, and we left the far-famed Epsom downs with the reflection that the boys educated at the College are destined to take a prominent place in the coming generation. We congratulate the Profession on such a school being firmly established for our sons, and all honour and hearty thanks are due to Mr. Propert. It is a mighty work for any man to have successfully carried out, and such a result could alone be accomplished by great judgment, tact, and unwearied earnestness of purpose.

ASSOCIATION OF MEDICAL OFFICERS OF ASYLUMS FOR THE INSANE.—The annual meeting of this Association was held on Thursday, July 9, by permission of the President and Fellows, at the Royal College of Physicians. Dr. Kirkman, the retiring President, resigned the chair to Dr. Skae, of Edinburgh, who delivered an able address. There was a numerous attendance of members, among whom were Dr. Conolly, Dr. Thurnam, Dr. Monro, Dr. W. Kirkman, Dr. Sherlock, Dr. Wood, Dr. Duncan, Dr. Fox, Dr. Wollaston, Dr. Willett, Dr. Crichton Browne, Dr. Hertz, of Vienna, etc. The resignation of Mr. Ley, for many years Treasurer of the Association, President 1848, was received with much regret. The following officers of the Association were elected: —President-Elect, Dr. Monro; Treasurer, Dr. Paul; Editors of the *Journal*, Dr. Lockhart Robertson and Dr. Maudsley; Secretaries for Scotland and Ireland, Dr. Rorie and Dr. Stewart; General Secretary, Dr. Tuke. Twenty-two new members were proposed, and the following distinguished psychologists elected honorary members:—William Lawrence, F.R.S., Surgeon to Bethlehem Hospital; Dr. Delasiauve, Editor of the *Journal de Médecine Mentale*, Physician to the Bicêtre, President of the Société Medico-Psychologique of Paris; Dr. Girard de Cailleux, Inspector-General of Asylums in the Prefecture of the Department of the Seine; Dr. Moreau de Tours, Chief Physician of the Salpêtrière; Dr. Damerow, Physician of the Halle Asylum, Prussia; Chief Editor of the *Allgemeine Zeitschrift für Psychiatrie*. A carefully-written paper was then read by Dr. Eastwood on Private Asylums. Papers by Dr. Robertson and Dr. Maudsley were on the list, but the time of the Association was occupied in a long and animated discussion upon the questions involved in the proposed removal of Bethlehem Hospital. Upon the motion of Dr. Lockhart Robertson, seconded by Dr. Conolly, the following resolution was carried unanimously:—"That the members of the Association have regarded with especial interest the question of the removal of Bethlehem Hospital to a site more adapted to the present state of psychological and sanitary science, and affording enlarged means of relief to the insane of the middle and educated classes in impoverished circumstances, and that they desire to express their concurrence in the representations already made to the governors of that important institution by the Commissioners in Lunacy." The annual dinner of the Association was held at the Freemasons' Tavern, Dr. Skae, President, in the chair. Among the guests were Dr. Bucknill and Dr. Hood, honorary members; Dr. Webster, Dr. Russell Reynolds, and Mr. Skae.

AT a meeting of the Ulster Medical Society, held in their rooms, High-street, Belfast, on Saturday, July 4, Professor Ferguson directed the attention of the members to "A Correspondence between Jas. Vose, M.D., of Liverpool, and the Executors of the late Geo. Grant, Esq.," just published. The entire correspondence having been read and commented on, it was moved by Professor Ferguson, seconded by Dr. Wheeler, and resolved unanimously:—"That the members of the Ulster Medical Society entirely concur in the opinions expressed by Drs. Watson and Latham respectively in their letters, and beg leave to offer to Dr. Vose the assurance of their respect for, and admiration of, the independent and honourable course pursued by him through the entire correspondence. Jas. Patterson, M.D., Chairman; H. Whitaker, M.D., and John McCrea, M.D., Hon. Secs."

COLONIAL LAWS AGAINST DRUNKENNESS.—The *Lyttelton Times*, published at Canterbury, New Zealand, has the following advertisement:—"Notice to the Public.—Whereas it has been this day proved to the satisfaction of us, the undersigned, being three of her Majesty's Justices of the Peace, that one Mary Ann Robertson, of Christchurch, who is described at the foot of this notice, has become an habitual drunkard, and is injuring her health by excessive drinking, we hereby, under the provisions of the 33rd clause of the 'Public-house Ordinances, 1862,' give notice, that we prohibit all persons from supplying the said Mary Ann Robertson with any spirituous or fermented liquors whatever for the space of two years from the date hereof." This warning is enforced by the threat of a fine of £20, or three months' imprisonment.

INQUESTS OF 1862.—The coroners' returns show that 20,591 inquests were held in England in the year 1862—a number slightly below the average—14,198 on males, and 6,393 on females. There were 221 verdicts of murder, 207 of manslaughter, 1,284 of suicide, 2,429 of "found dead," 157 of death from want, cold, and exposure. 6,002 inquests were held on children under seven years of age, 1,107 of the number on illegitimate children; and there were 3,239 inquests on infants not more than a year old, of whom 859 were illegitimate. This is the first year in which children of illegitimate birth have been distinguished in these returns; more than a sixth of the children on whom inquests were held were illegitimate, more than a fourth of the infants not above a year old. 124 of the verdicts of wilful murder—more than half of all the verdicts of wilful murder—related to children not more than a year old.

CONFLICTING MEDICAL EVIDENCE AGAIN.—LEA *v.* THE LONDON AND NORTH-WESTERN RAILWAY COMPANY.—This was an action, tried at Worcester on July 20, to recover compensation from the defendants for injuries received by the plaintiff, arising from an accident at Tipton in July last to a railway train, in which he was a second-class passenger. The plaintiff is 37 years of age, and his net income since the accident had fallen from £400 per annum to £146. He had lost permanently two of his appointments, of which the income amounted to £35 a year, and with his Medical expenses, etc., he was out of pocket between £400 and £500. He was brought into court on crutches, and had to lie in a recumbent position while he gave his evidence, but the case turned on the Medical evidence. For the plaintiff, a Mr. Hicks, Mr. J. S. Fletcher (his own Medical attendant), Mr. Carden, of Worcester, and Dr. Bell Fletcher, of Birmingham, were called, and the effect of their evidence was, that the plaintiff had received permanent injuries to the nervous system, and had even exhibited symptoms of tetanus; that his brain was affected, so that he could not cast up figures; that he had paralysis of the arm and leg; that his spine was injured; that there was effusion of blood in the chest and in the brain; that he had an intermittent pulse; and that, after keeping the plaintiff quiet and in a recumbent position, he still exhibited no signs of recovery. It was admitted by Mr. Pemberton and Mr. Baker, two Hospital Surgeons at Birmingham, and the Medical advisers for the Company in that district, that the plaintiff had received a severe shock to the system, and their evidence was to the effect that this was a case in which a Surgeon's opinion was of more value than a Physician's, and that in their examination of the plaintiff they could see no structural change in the brain, and they did not consider that the spine was injured, inasmuch as there was no derangement of the urinary organs, and that there was no paralysis, partial or complete, of the parts below the seat of the injury, nor any wasting away, such as they should have expected to find; that the intermittent pulse would be easily accounted for by the fact of a patient who had been so long in a recumbent position being put to sit up; and they considered that the plaintiff would recover, and probably in a short time. They thought that he had not been properly treated, and that if he had been put to exercise, instead of to lie down and be idle, he would now be able to transact his business, and that want of use of the mental powers would account for the plaintiff's not being able to cast up figures. The jury found a verdict for the plaintiff—damages, £2000.

CONVERSION OF CEMETERIES INTO PUBLIC GARDENS.—At the fortnightly meeting of the Board of Works for the Holborn District, Dr. Gibbon presented a Report, in which he stated:—"I take the opportunity, therefore, of stating that one very efficacious mode in a large city like London is, to provide public walks where the poorer classes, especially the young, can have the advantage of fresh air and exercise in their occasional leisure hours. The public parks, which administer so much to the health and comfort of those who reside within easy reach of them, are too distant to be of much avail to the poor of this district. Even the 120 acres of land north of the Seven Sisters-road, which has been purchased by the Metropolitan Board of Works as a park for the borough of Finsbury, is full four miles distant. Under these circumstances, it seems to me that the disused burial grounds, of which there are about six acres under your sanitary supervision, would make admirable walks for all classes. In fact, the one situated in Benjamin-street is already trespassed on for this purpose by the inmates of the adjoining houses. If the admission were authorised instead of being unauthorised, as it is over the wall, I believe no such nuisance would be committed in it as those mentioned in a former report. All that would be necessary to be done by the vestries and churchwardens to make these cemeteries subserve this most useful purpose, would be to have their doors thrown open to the public during certain hours every day. Of course they are capable of improvement and ornamentation, by removing the dead walls around them, making additional walks, and planting additional shrubs and flowers, but this expense is unnecessary for the object in view. It might be worth while for your Improvement or Works Committee to consider whether it is practicable to obtain this privilege for the poor."

INTERNATIONAL CONGRESS OF VETERINARIAN SURGEONS IN HAMBURG.—The spread of cattle plagues from Eastern to Western Europe, the losses sustained in Great Britain and Ireland since 1842 by the lung disease in cattle, the foot and mouth disease, and by small-pox in sheep, and the very threatening aspect of the present condition as to health of continental stock, have led to the holding of an international congress of Veterinary Surgeons in Hamburg during the week of the International Agricultural Exhibition in that city. The first circular proposing the congress was issued in the month of March last, by Professor Gamgee, of the New Veterinary College, Edinburgh, and upwards of seventy Professors and Practitioners attended the first two meetings on the 14th and 15th inst. The majority of Professors attended officially, being sent from Russia, Austria, Prussia, Sweden, Denmark, Hanover, Saxony, Bavaria, Würtemberg, Switzerland, etc., to ascertain what measures could be recommended so as to insure an efficient co-operation between different Governments interested in the prevention of cattle and sheep plagues. The Hanseatic Government has done all in its power to further the objects of the Congress, and has placed at the disposal of the assembly the hall of the Public Gymnasium. One of the most learned veterinarians in Europe, Professor Hering, of Stuttgart, was appointed as president at the first meeting, and Professor Gamgee, of Edinburgh, was called upon to act as vice-president. After the appointment of committees and office-bearers, Professor Gamgee, of Edinburgh, as originator of the congress, was asked to address the meeting in explanation of its objects. He spoke of the alarming invasions in Western Europe by cattle and sheep plagues, which owed their extension not a little to the opening of British ports for foreign cattle in 1842. The continental traffic in cattle has completely changed since then, and there is a constant travelling of stock westward from countries where they realise smaller sums than in the markets of Paris or London. He stated that the deaths and deterioration by disease among cattle, sheep, and swine, in the United Kingdom of Great Britain and Ireland, led to an annual money loss of £6,000,000, and that half the money loss was due to the prevalence of contagious pleuro-pneumonia. He averred that the British islands had lost two head of British cattle for every one imported since 1842, and, although he was not desirous to stop free trade in cattle, he thought that the prevention of so much disease, the saving of so much money to the nation, was a matter of paramount importance. Professor Gamgee went on to show the prejudicial influence of the presence of contagious diseases among animals in Britain on our colonial possessions and many foreign countries. British stock is imported everywhere for the improvement of breeds, but the results of such importations since 1842 have often been to propagate the maladies which we have seen among our home stock since foreign animals first entered our markets. The truth of Mr. Gamgee's statistics was established by the bankruptcy of almost every live stock insurance company since 1842, and the ruin of hundreds of farmers, whether they trusted or not in live stock insurance associations. The only method by which plagues could be met was by the adoption of preventive measures, which scientific men could certainly suggest, and he hoped that the result of the first International Veterinary Congress would be to demonstrate to all the very great importance of the veterinary art, and encourage all present in promoting the success of many more such meetings in future years. Professor Röle, of Vienna, then addressed the meeting on the prevalence of the Russian plague in Central Europe, and especially in Austria. A keen interest was manifested in this matter, owing to the very great extensions of the disease through Hungary, Turkey, Italy, etc. The discussions on this subject are not yet concluded.

THE HARVEST AT ROME.—The following letter has appeared in the *Times* of the 22nd inst.:—

"Sir,—There was laid before the College of Physicians on Monday last, by the Duke of Newcastle, a report from our Consul at Rome, which may possess some interest for your agricultural readers.

"It is well known that the farmers in the Campagna are used to depend entirely upon labourers from the Abruzzi for getting in their harvest. Attracted by wages higher than can be gained at home, swarms of these poor fellows tramp in, subsist almost entirely on bad melons and water, sleep in a ditch, under the lee of a broken tomb or ruined villa—in a catacomb—anywhere. No Roman, however striving, will undertake this fieldwork, for now begins the malarious season, and he has seen the unfortunates who have engaged in it brought in carts by thousands to the city Hospitals, or perhaps crawling along to die by the roadside. It is a positive fact that in some years not more than one-third return home alive.

"This year, owing apparently to the Italian Government having made arrangements for the more continuous employment of their subjects, and offering facilities for their migration by rail elsewhere, not a single labourer arrived. The harvest would have rotted in the ground, had not the Pope given leave and encouragement to his unemployed soldiers to undertake the work, which example was followed by the Duke of Montebello in respect of the French troops. This has been done on a large scale, the men having their full rations of meat and wine served out to them daily. 'Tis to be hoped that the jealousy of the lazy Trasteverini will be roused, and that next year they will say—

'Impius hæc tam culta novalia miles habebit?
Barbarus has segetes?'

For as yet neither the 'miles' nor the 'barbarus' has suffered, and the astonished natives see for once the harvest got in without the sickles of the reapers being checked by the scythe of Death.

"Mr. Severn attributes this extraordinary circumstance to the full allowance of stimulants and wholesome food; and, doubtless, that may receive much of the credit. But the difference of lodging should not be passed over. These soldiers, of course, sleep in either their own barracks, or in some high and dry building selected by their officers; and all the minute precautions of dry-foot-drill, etc., for which we are wont to smile at French army Surgeons, are naturally exercised. I am sure that this is a matter of prime importance; for a few Roman proprietors, instigated probably by their English wives, have for some years put up rough barns and cottages for the harvesters to sleep in, and report a great diminution of fatality from fever in consequence.

"We have but rare cases of *febbre perniciose* in England, but still every Hospital Physician can testify that the funds of charitable institutions are heavily taxed in autumn by reapers and hoppickers, and in summer by haymakers, who have contracted ague, pneumonia, typhus, and rheumatic fever by exposure and improper food. To allow of sleeping in barns and ditches costs the country more in the imperfect cure of the illness it entails than double the value of the wages made by it.

"Will not some philanthropic economist tell us how to avoid the evils of this necessary annual influx of ignorant and expensive harvesters?

"I am, Sir, your obedient servant,
"THOMAS K. CHAMBERS, F.R.C.P.
"22B, Brook-street, Grosvenor-square, July 21."

POST-MORTEM BLEEDING.—Dr. Metz observes, that although the remarkably fluid condition of the blood after drowning is a familiar circumstance, yet he is not aware that the fact of superficial, slight, and accidental wounds beginning to bleed again after a long period has ever been noticed. He was called to inspect the body of a woman, aged 43, who had been missed for nearly a month, and was found in a pond. The appearances of the corpse betokened that it had lain in the water for some days, but it was still in good preservation. Small excoriations of the lip and the lobe of the ear were surrounded by fluid blood, apparently in consequence of the rough transport. In order that the examination might be made, the face was cleaned, when the bleeding reappeared anew; and the same phenomenon occurred when the lips were moved during a forced opening of the closed teeth.—*Casper's Vierteljahrschrift*, 1863, No. 1.

A NEW AND DELICATE VEGETABLE REAGENT.—M. Goppelsroeder, of Bâle, has discovered a very delicate reagent in the extract of the petals of the mallow. The extract of mallow is violet, and it becomes red when treated by an acid. Paper is tinted with this extract, and it then may be employed in the same way as litmus or carcuma. The alkaline bases render this paper violet when their solutions are diluted, and green when they are more concentrated. If a solution contain only two-millionth part of caustic soda, the reagent becomes of a violet colour, producing effects when litmus and carcuma cease to do so. The alkaline nitrites furnish the same result. —*Bull. de Thérap.*, No. 9.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Burrows.—16, Wimpole-street Cavendish-square.

H. H. H.—We believe that the office of dispenser no longer exists, but our correspondent should write to the Army Medical Department, Whitehall.

Mr. J. Mann.—We are so pressed upon by the quantity of matter that we are often compelled to put communications in small type, or to leave them out altogether.

Justitia.—Any body may sell an authority (*vide* Dean Swift's "Tale of a Tub"), but whether that authority shall be recognised and valid is quite another thing. We think not.

Dr. Henry McCormac's remarks "On the Preparation of Flesh Meat so as to Insure a better Food Supply," which we inserted in our Notes column of last week, were extracted from the *Dublin Medical Press.* The acknowledgment was inadvertently omitted.

Durham, R. H. S. C.—The publication of the letter would involve us in an action for libel. Our correspondent can do nothing better than submit his case to Medical arbitration.

If we wanted any evidence in addition to that furnished by the cases of homicide we noticed last week to prove the necessity of surveillance over persons who have exhibited only incipient symptoms of insanity, the late attack in a railway carriage by a madman would afford a strong instance in point. The public will some day come to understand that to permit a madman to be at large is a greater injury to society than to commit the mistake of sending a sane man who behaves like a madman to a Lunatic Asylum.

Another Moa seen.—A man of the name of Cottier, who is now in Nelson, reports that on a morning near the end of January last, while walking along the banks of a creek running into the river Mokihinui, he saw, at a distance of about 200 yards from him, a large bird picking at something on the ground. He describes the bird as resembling a wood-hen both in plumage and form, but of gigantic size. Its head was hard-looking, dark-coloured, and flat at the top, with a semicircle of red below the eyes. The head of the bird was as large as that of a calf, and standing about eight feet from the ground. Cottier, after making his observations on this huge bird, stole back to his camp for a gun, but when he returned to the spot with his mates, the bird had disappeared. Cottier is a man from the north of England, and has not been a year in the colony, and had never heard of a bird resembling the one he saw as having at any time existed in the country. We regard the statement made by Cottier as confirmatory of the testimony of Mr. Brunner, who about two years ago saw the foot-prints of this gigantic bird on the Takaka ranges, that in the hitherto unbroken solitudes of the vast tract of country lying between the strip of settled country on the eastern side of this island and the west coast, living specimens of the moa yet exist.—*Nelson Examiner.*

PHYSICIAN AND M.D.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Will you be kind enough to inform me if the qualifications given by the King's and Queen's College of Physicians of Dublin entitle you to sign yourself M D.? I am, &c. W.S.

University College, July 15.

*** The question is *sub judice.*—ED.

DISCOVERY OF A MEDICAL PAPYRUS AT THEBES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—During a visit to Upper Egypt last winter, I had an opportunity of examining a papyrus in the possession of Mr. Smith, an American gentleman resident at Luxor, who was also good enough to allow me to peruse his translation of a portion of its contents. It was written in a demotic character, and seemed, as far as I could gather from the somewhat obscure reading of the English version to contain a discourse on boils (ulcers?), fractures and wounds of the head in general, with aphorisms, prognostics, and a prayer or oath to be used by the Physician when in attendance on the sick; the whole somewhat after the style of the Hippocratic writings and early Grecian school of Medicine. This valuable, and possibly unique, original record of ancient Egyptian Medical literature certainly well deserves the attention of persons capable of doing justice to its contents. I believe Mr. Birch, of the British Museum, is aware of its existence. Moreover, I understood from Mr. Smith, when I last saw him in February, that he would dispose of the original as soon as he had made a copy of the text; the sum, however, he did not then name.

Malta, June. I am, &c. A. LEITH ADAMS.

DR. CHAPMAN'S METHOD OF CONTROLLING THE CIRCULATION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The paper in your impression of last week by Dr. Chapman, upon "A New Method of Treating Disease by Controlling the Circulation of the Blood in Different Parts of the Body," must afford all who are labouring in the same field as Dr. Chapman much satisfaction, as it is a straightforward exposition of a very simple method of affecting the ganglionic nervous system, and secondarily the capillary circulation.

Your readers may not be aware, perhaps, that we have the same power over the ganglionic nervous system by the various methods of applying the continuous galvanic current, whether it be applied direct from the centre to the periphery, or inversely. My reason for addressing you is to afford every encouragement to Dr. Chapman in his experiments, and, should he feel disposed to carry out his practice at the London Galvanic Hospital, I will undertake to render him every facility, and the two plans can be tried side by side, as there is no great difference between them—being correlative forces—although I believe that in galvanism we have a force more adapted to the treatment of disease than even heat and cold as applied by Dr. Chapman. I am, &c.

70, Brook-street, July 20. HARRY LOBB.

MERCURY IN SYPHILIS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The unsettled state of opinion amongst the Profession as to a mercurial or non-mercurial treatment in syphilis, renders it desirable that the subject should undergo a more thorough ventilation than it has yet undergone; and for this purpose it is necessary that the opinions of the younger members of the Profession, free from the bias of preconceived ideas, should be imported into the discussion. The subject seems to have been blinked by Medical men in general, who have consequently been content to follow the teachings of some leading specialist, and it is questionable if truth can be elicited in this way.

Great credit is due to my friend Dr. Drysdale for the independent manner in which he has prosecuted and brought forward this subject in your columns. His cases show what is strange, that even now some Practitioners salivate their syphilitic patients, though it is by these means that mercurialists themselves have brought discredit on the drug they so much vaunt.

Virchow has maintained that the abiding place of the syphilitic poison, is the tissues; none is surely safer than the skin, as an organ of elimination none so good. Hence, Nature in her wisdom seizes upon this. The wise Physician plys his art to aid and not to thwart her. Does mercury assist him here? In writing of this drug. Dr. Headland says, "As agents which impoverish the blood drive it to the tissues for its replenishment, and thus give work for the absorbents, so mercury wastes the frame, causes the body to become thin and feeble, the face pallid, and diminishes the nervous energy." By the waste of the tissues, then, we have the syphilitic poison thrown back into the circulation, to be deposited in some deepseated and perhaps vital part of a frame enfeebled by the drug, and robbed of almost all its nervous energy. This disintegrating power of mercury is produced, not only by large doses, but also by small, long continued.

I do not. however, consider mercury deserving of the wholesale denunciations levelled against it, nor can I subecribe to the opinion that it is useless or unnecessary in any case, and I may point to erythema palmare, often a very intractible form of secondaries under most drugs, as readily yielding to the exhibition of small doses of the bichloride. Mercury, like every other drug, is liable to abuse; more than any other drug it has been abused, particularly in the treatment of syphilis, but this, I apprehend, is no valid argument for expunging it altogether from our Materia Medica.

I may here remark that some misunderstanding seems to exist with regard to the time of cure between a mercurial and non-mercurial treatment. Mercury will, I believe, remove any single outbreak of syphilis more rapidly than any other drug, but prolongs the entire eradication of the disease. It follows therefore that it should not be resorted to until all other drugs have failed. The dose should be small, such as one-sixteenth to one-tenth of a grain of the bichloride, and not continued longer than two or three weeks.

I am, &c.

Warrington-terrace, Maida-vale. R. S. Sisson, M.D.

Hospital Formulæ.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Your Journal of the 11th instant contains a letter from "Pro re Nata," in which there are some remarks, which, bearing upon a most important question, namely, the therapeutical treatment of patients, have seemed to me to demand some reply.

The Practitioner who thus favours us with his opinion appears to be disappointed with the contents of the volume published by Squire, and sees in its pages little but the routinal mode of physicking; is disposed greatly, one would think, to the "*laisser faire*" system of medication, and, wishes the leading men of the Profession—Medical and Surgical—to carry out that which the writer would rather not carry out himself, his practice wanting, as it would, the received approbation of the leaders.

Now, Sir, any one who reads and watches the progress of Medical science as carried out at home, must be conscious of the ever-ceaseless struggle going on between the conservative element on the one hand, and the innovating on the other; and if in our own country we do not make show of a large list of new drugs, to the abandonment of old, well-trusted servants, our practice may yet well vie with that of our more imaginative and experimental neighbours. True it is that one would often wish to hear of results concerning remedies vaunted about as applicable to such-and-such a disease; but until more forcible measures are favourable with the Medical Profession for a systematic research into the therapeutical value of agents, we can only gain additional knowledge slowly, and in the circuitous way of periodicals or special communications.

With respect, however, to these said Hospital prescriptions, "Pro re Nata," according to my idea, must, I fear, be labouring under one of two errors: either that gentleman has never been thoroughly initiated into the working of London Hospitals, or his memory has been, it is to be feared, faithless to him since that period. What are these so-called Hospital recipes, and how are they employed? They are the collection of a series of prescriptions written by men who, after employing them in actual practice, have, from the good services they have derived from their use in certain cases, handed them over either for the use of their successors on the one hand, or in order that the prepared formula should always be in readiness, thus effecting a saving of time to prescriber, dispenser, and patient. Now, speaking from a rather intimate knowledge of indoor Hospital life, I have no hesitation in thinking that the writer has taken a rather awkward view of the way in which these formula are used. Allowances being made for a certain number of cases of applicants, to whom medicines are merely given for form's sake, or in whom food, and rest, and other hygienic measures would be of most use, look around the Hospitals of London, scan the features of the indigent applicants, its food and good housing are actively demanded, how many are they who come for relief under the terrible pressure of disease incipient or active? and let a justifiable answer be given that more routinal drug-delivery is necessary and is rare! Let those who have zealously and conscientiously followed Hospital practice and clinical teachings say how often these Hospital formulæ are given, how often changed for another, and how often put aside for the exhibition of a fresh one, dictated by the exigencies of the case at the moment, and given, not to satisfy routine, but to discharge a duty to a fellow-creature suffering.

With the prescriptions themselves, their real value no one can doubt, and it would indeed be hard for any one to point out a better set of prescriptions than those contained in these Hospital collections formulæ which with those of the present official pharmacopœia it were well if Practitioners in daily routinal practice would occasionally consult, as they would there see combinations their memory had perhaps forgotton or never seen, and in the end the patient would be no loser, and the Practitioner the gainer both in repute and success, provided always that the prescription be used as it should be; remembering that emanating as they do in the majority of cases from men who have jotted them down in the Hospital-book as a record of faithful servants, for certain work, at certain time, but which were not to be expected to do anything or everything, but only some distinct duty; and such must be the true aim of rational therapeutics. I am, &c.

July 15. J. W. M.

COMMUNICATIONS have been received from—

W. S., University College; Dr. Jervis: Dr. Parkes; A. M. Randall, Esq.; R. H. S. Carpenter, Esq.; Royal College of Physicians; Dr. W. F. Cleveland; Dr. H. Whitaker; H. H. H.; Mr. R. B. Carter; Dr. J. W. Middleton; Dr. G. R. Sheraton; A. L. Adams; Royal Medical Benevolent College; An Army Medical Officer; F.R.C.S.; Dr. Struthers; H. Lobb; Mr. R. W. Dunn; A. Smith; T. Graham; Justitia; Dr. Gibbon; Mr. C. R. Dallas; An Old Surgeon; Mr. Stokes; Mr. Burrows; Dr. David Livingstone; Mr. Holmes Coote; Mr. Lawson.

BOOKS RECEIVED.

Photographic Journal. July, 1863. London: Taylor and Francis.

The Australian Medical and Surgical Review, No. 2, April, 1863. Melbourne: F. F. Baillière.

*** Contains original articles on Delirium Tremens Treated with Digitalis, on Traumatic Cataract, on Orchitis, and on the Use of Nitric Acid in Piles; reviews of several local works, the Examination Papers in Medicine of the Melbourne University, and general news. It is far superior to most of its colonial and even American contemporaries.

Bulletin de l'Academie Royale de Médecine de Belgique. Année 1863, VI. No. 1, No. 2. Bruxelles. 1862-63.

*** The first of these volumes of Transactions, after formal matter and correspondence, contains original descriptions of an obstetric forceps with a third handle for the hands of a second operator in very difficult labours. Another mechanical contrivance for pushing back a prolapsed loop of cord in the same circumstances follows; a method of using polypus forceps in the "podalic version;" also a new instrument for attaching a loop to the infant's foot to facilitate delivery. The use of dislocation pulleys probably remains to be advocated by some future obstetrician; but even without that suggestion it really seems as though the rising generation of Belgium had to be extracted from the maternal uterus by main force, like a tight cork from a wine bottle. The second volume contains some remarks upon an American operation for vesico-vaginal fistula, and an interesting memoir on the inhalation of carbon in powder by artisans and miners.

The Progress of Ophthalmic Surgery, etc. By John Zachariah Laurence, F.R.C.S., etc. 1863.

*** This is an oration delivered before the North London Medical Society early in the present year. It reviews most of the important topics recently in discussion. Glaucoma and iridectomy, iridesis as performed by Mr. Critchett, various forms of extraction of cataract, are successively adverted to; the ophthalmoscope and its principles occupy some pages, and astigmatism leads, lastly, to the conclusion that ophthalmology is rapidly advancing.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 18, 1863.

BIRTHS.

Births of Boys, 930; Girls, 880; Total, 1810.
Average of 10 corresponding weeks, 1853-62, 1639 8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	725	639	1364
Average of the ten years 1853-62	580·9	530·6	1111·5
Average corrected to increased population..	..	..	1223
Deaths of people above 90	..	2	2

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrœa.
West	463,388	5	5	10	2	4	7	21
North ..	618,210	15	3	20	7	5	14	35
Central ..	378,058	9	..	12	3	8	5	32
East	571,158	13	3	22	2	6	13	33
South ..	773,175	9	5	23	5	5	14	27
Total.. ..	2,803,989	51	16	87	19	28	53	148

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30 029 in.
Mean temperature	61°
Highest point of thermometer	86
Lowest point of thermometer	42·5
Mean dew-point temperature	50·3
General direction of wind	N.E.
Whole amount of rain in the week	0·00 in.

APPOINTMENTS FOR THE WEEK.

July 25. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.: King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

27. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

28. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

29. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

30. *Thursday.*

Operations at St. George's, 1 p.m; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

31. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

PROFESSOR HUXLEY'S LECTURES
AT THE
ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

III.—The Skull of the Pike compared Structurally and Developmentally with that of Man.

In the series of animals possessing a bony skeleton, osseous fishes and man may be regarded as the extreme terms; and I now select the skull of an osseous fish—the Pike—for comparison with that of Man. Whatever community of structure obtains between these must be expected to persist throughout the intermediate terms—while the differences between them will be more or less completely bridged over by the subsequent study of the skulls of the lower Mammals, Birds, Reptiles, and Amphibians.

At first sight, the skull of a pike (Fig. 18) presents the most striking dissimilarity to that of a man. The skull proper is flattened, narrow, and elongated, its vertical height and transverse diameter being insignificant when compared with its antero-posterior length, the predominance of which is due chiefly to the disproportionate enlargement of the anterior half of the cranio-facial axis, *i.e.*, the presphenoidal and ethmo-vomerine regions. The brain case is relatively very small and much depressed, instead of presenting the capacious dome of the human skull, while, on the other hand, the facial apparatus is very large and complex, and its components are almost all movable upon the skull. Another circumstance, which at once strikes the observer, is the fact that the lower jaw is not, as in Man, articulated directly with the skull; but is connected with the latter by the intermediation of a complex, mobile suspensorial apparatus (Fig. 18, *H.M.* to *Qu.*) which articulates with the skull above and with the lower jaw below. A part of the same apparatus gives attachment to the hyoidean arch, and to the bones of the gill covers.

Fig. 18.

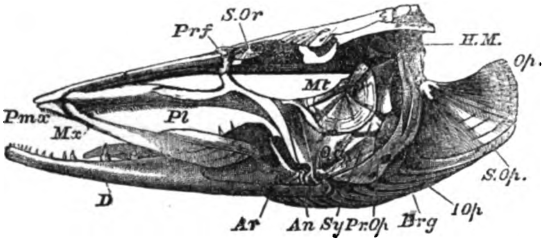

Fig. 18.—Side view of the skull of a Pike (after Agassiz) *Prf*, prefrontal; *H.M.*, hyomandibular bone; *Op.*, operculum; *S.Op.*, sub-operculum; *I.Op*, inter-operculum; *Pr.Op*, pre-operculum; *Brg.*, branchiostegal rays; *Sy*, symplectic; *Mt*, meta-pterygoid; *Pl*, palato-pterygoid arch; *Qu.*, quadratum; *Ar*, articular; *An*, angular; *D*, dentary.

A certain fundamental resemblance may, however, be readily traced beneath these external differences. Thus, if a transverse and vertical section be taken through the pike's skull, so as to traverse the organ of hearing, and to divide the suspensorium longitudinally into two parts, the posterior and anterior moieties of the skull will present the appearances represented in Figs. 19 and 20. The posterior segment (Fig. 19) is obviously comparable with the corresponding segment of the human skull (Fig. 3), consisting, as it does, of a floor, with an upper arch, which, in the recent state, inclosed part of the brain, and with a lower arch formed by the various parts of the hyoidean apparatus.

Furthermore, certain of the bones (*EpO*, *OpO*, etc.) which enter into the composition of the upper arch are especially related, as in the corresponding section of the human skull, to the organ of hearing, and it is with some of these that the inferior arch is connected.

The anterior segment (Fig. 20) presents a similar general correspondence with the corresponding segment (Fig. 2) of the Man's skull.* That is to say, there is a floor with which is connected an upper arch, forming part of the brain case, and a lower arch, which enters into the composition of the face. The sides of this arch in the sectional view are partly constituted (as in Fig. 2) by bones specially connected with the auditory apparatus, and the peduncle of the lower arch is articulated with these bones. The chamber contained within the lower arch, however, differs from that seen in the section of the human skull in that it is entirely devoted to the buccal cavity, and is not subdivided by processes of the palatine and maxillary bones into an upper, nasal, and a lower, oral, passage.

Fig. 19.

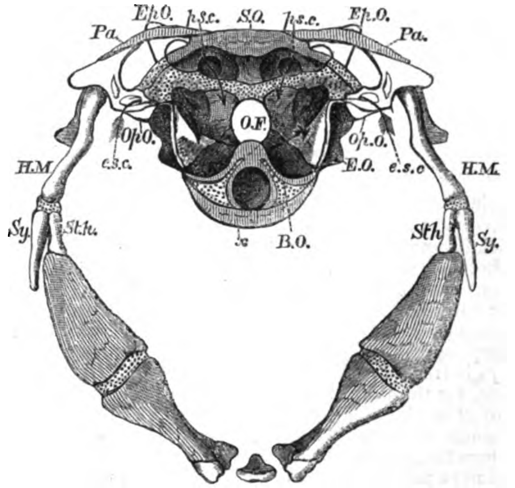

Fig. 19.—The posterior segment of the skull of a Pike which has been vertically and transversely bisected. The bones of the inferior arch are represented diagrammatically. The epiotic, opisthotic, pro-otic, and squamosal bones are left unshaded, as in the corresponding section of the human skull. *p.s c.*, *e s.c.*, arrows indicating the positions of the posterior and external semicircular canals; *x*, para-sphenoid.

Fig. 20.

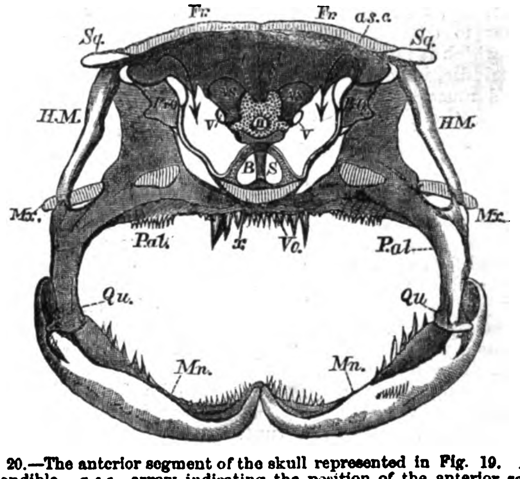

Fig. 20.—The anterior segment of the skull represented in Fig. 19. *Mn*, mandible. *a.s c.*, arrow indicating the position of the anterior semicircular canal. The letters *B*, *S*, one on each side of the basi-sphenoid, are seen through the canal for the orbital muscles. The pro-otic bone is left unshaded. In this, and in the preceding, figure the dotted shading indicates cartilage; but, as the drawings were made from a dry skull, it must be remembered that the whole of the cartilage entering into the cranium is not represented.

The comparison of the transverse sections of the Pike's with those of the Man's skull thus enables us to perceive a certain fundamental resemblance. In each there is an axis, upper and lower arches; in each the section separates the bones which lodge the auditory organs; and the most apparent difference between the two is the vastly greater proportionate size of the periotic bones in the Pike.

The comparison of the longitudinal section of the Man's skull with that of the Pike (Fig. 21) confirms the conclusions arrived at from the study of the transverse sections. A "cranio-facial axis," composed partly of bone and partly of cartilage, extends from the occipital foramen to the anterior extremity of the snout of the fish. The posterior part of this constitutes the floor of the cranial cavity, and is the basi-cranial axis. The anterior part, excluded from the cranial cavity, is, as in Man, a basi-facial axis.

FIG. 21.

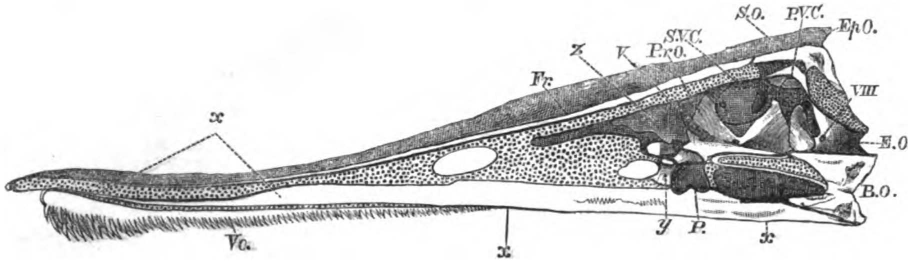

FIG. 21.—Longitudinal and vertical section of a fresh Pike's skull. The out surface of cartilage is dotted. For *S. V.C.*, *P. V.C.*, read *a.s.c.*, *p.s.c.*, as in Figs. 19 and 20.

Again, as in Man, three pair of chambers, destined for the lodgment of the organs of the higher senses, are placed symmetrically upon the sides of the Pike's skull. The olfactory chambers are situated just in front of *Prf.*, in Fig. 18, and the orbits beneath *S.Or.*, while the auditory organs are inclosed within the posterior bony walls of the brain case, as indicated in the transverse sections. And, as in Man, the olfactory and auditory apparatuses are fixed within their chambers, while the eye is freely movable within the orbit.

Thus, for the Pike, I may repeat the phraseology which I employed in giving a general description of the skull of Man. It consists of an axis, of upper and lower arches, and of chambers for the sensory organs.

The next point is to ascertain how far this correspondence, thus traced generally, extends into the details of the composition of the skull; and here we may conveniently begin, as before, with the study of the cranio-facial axis.

Viewed as a whole, this axis is rounded and thick behind, compressed from side to side in the median region, and thickened and depressed in front. It is composed, as I have said, partly of bone and partly of cartilage. Behind, it consists of a single well-ossified mass (*B.O.*), which offers, posteriorly, a deeply excavated conical articular facet, quite similar to that presented by the body of the first vertebra, with which it articulates. Anteriorly, it is also excavated in the middle, its conical cavity terminating the canal for the orbital muscles behind. Its upper face forms the hinder part of the floor of the cranial cavity and the inferior boundary of the occipital foramen. Its lower face is bevelled off in front, and articulates with the hinder part of the upper face of the bone *x*.

Laterally and posteriorly, it articulates with the bones (*E.O.*), which constitute the lateral boundaries of the occipital foramen; while, laterally and anteriorly, its deeply-excavated surface is free, and forms part of the deep chamber in which the sacculus of the auditory organ is lodged. The greater part of this bone is solidly ossified throughout, but its conical anterior cavity is lined by a thin shell of bone, which is separated by a continuous layer of cartilage, thicker above than below, from the rest of the osseous mass.

In a longitudinal section (Fig. 21) of a fresh Pike's skull the upper part of this layer of cartilage is readily seen, and can be traced, without interruption, from the axis of the bone under description as far forwards as the posterior margin of the pituitary fossa, and therefore, for a long distance in front of the anterior termination of the bone *B.O.* The layer of cartilage bends down at the sides, and so enters into the lateral walls of the cavity for the orbital muscles. The cartilage, however, does not immediately constitute the floor of the skull, or the roof and side walls of the canal for the orbital muscles, seeing that it is coated over, on both its faces, by bony matter, which is continuous with that forming the inner and the outer faces of the bone *Pr.O.*.

Although there can be no doubt, then, that the cartilaginous lamella in question forms part of the basi-cranial axis, it does not, strictly speaking, form part of the floor of the skull, being shut out therefrom by the extension over it of the ossifications (*Pr.O.*), towards the middle line. Leaving these ossifications out of consideration, however, it may be said that the free edge of the middle part of the cartilaginous lamella forms the posterior boundary of the fossa for the pituitary body, which dips down, surrounded by membrane, through the centre of the canal for the orbital muscles, and rests upon the concave surface of an elevation of the bone *x* at *P*, Fig. 21. Immediately in front of this elevation cartilage reappears, and extends, as an inter-orbital, ethmoidal, and internasal septum, to the end of the snout. The cranial cavity rapidly narrows above the cartilaginous inter-orbital septum, and ends where the olfactory lobes abut against the olfactory sacs. It appears to terminate much sooner, however; for the olfactory lobes, after running parallel with one another for some distance, diverge, and become separated by a plate of cartilage, which corresponds to a certain extent with the crista galli.

FIG. 22.

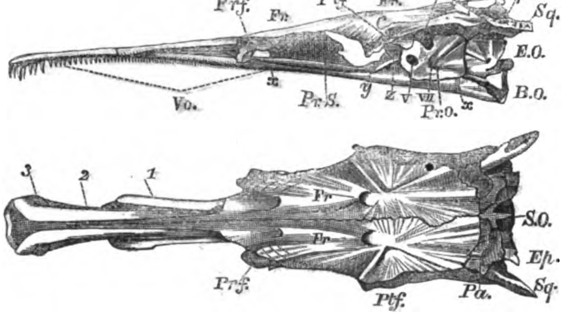

FIG. 22.—Side and upper views of a Pike's skull (after Agassiz). *a*, the articular facet for the hyomandibular bone; *x*, the "*para-sphenoid;*" *y*, the true basi-sphenoid; *z*, the alisphenoid.

Immediately in front of the pituitary fossa a thin plate-like ossification, *y*, is developed in the cartilage, and this plate sends off backwards and a little upwards, upon each side, a process which is connected posteriorly with the cranial floor. These two processes consequently lie at the sides of the pituitary fossa, and the "Y-shaped bone," as it has been well termed, thus furnishes part of the front and side walls of that fossa.

The next ossification to be noted in the craniofacial axis of the Pike is the great bone *x* (Figs. 19 to 22), which stretches like a splint, along the greater part of the length of the base of the skull.

The lower face of the hinder half of this bone is free, while that of its front half is covered by the bone *Vo*. The upper face of its hinder half articulates, at first, with the lower surface of *B.O.*, but is then free for some distance, forming the floor of the canal for the orbital muscles, and articulates by expanded aliform processes of its sides with the lateral walls of that canal. At the front part of the canal it exhibits the elevation which forms the floor of the pituitary fossa, and then, depressed at the sides, but exhibiting a median superior ridge, it underlies the inter-orbital and ethmoidal cartilages.

The last ossification of the cranio-facial axis is a depressed bone *Vo*, thicker in front than behind, which fits on to the under surface of the anterior half of the bone just described, and extends beyond it to the front end of the snout. The under surface of this bone is free, enters into the middle of the roof of the palate, and bears teeth.

In comparing the cranio-facial axis of the Pike with that of Man, two pair of bones appear, at once, to correspond so closely that no reasonable doubt can be entertained as to their homology. These are the posterior and anterior bones of the series in each case. The former, in its relation to the spinal column, to the medulla oblongata, and to the lateral arches of the skull of the Pike, is precisely comparable with the basi-occipital of Man; while the anterior bone as exactly answers to the vomer of Man; except that the fish, being devoid of any communication between the olfactory chambers and the cavity of the mouth, the vomer has a different form, and has of course no relation to nasal passages.

Again, it seems obvious that the ethmoid is represented only by cartilage, as in the fœtal state of the human skull, for there is no ossification in that portion of the cranio-facial axis which lies between the olfactory sacs.

And the like appears to be true of the presphenoid, for all that vertical plate-like portion of the cranio-facial axis which lies between the orbits, and beneath the peduncles of the olfactory lobes, and in front of the crossing of the optic nerves, is merely cartilaginous.

The Y-shaped bone forms part of the front and side walls of the pituitary fossa, and its upper prolongations are connected behind with the bones *Pr. O*, and with the floor of the cranial cavity. In this floor, the long cartilaginous plate, already mentioned, constitutes the hinder boundary of the fossa, and separates the Y-shaped bone from the basi-occipital. Now, the proper basi-sphenoid, (that is to say, the central ossification taken apart from the *lingulæ*), forms the front boundary of the pituitary fossa in Man; but extends obliquely downwards in front of it as the stem of the Y-shaped bone does in the Pike. Furthermore, in the fœtal human skull, the basi-sphenoid contributes nothing towards the posterior boundary of the pituitary fossa, which is formed by the long cartilaginous synchondrosis which connects the rudimentary basi-sphenoid with the basi-occipital. I identify the lamella of cartilage which I have described in the Pike with this synchondrosal portion of the fœtal human *basis cranii*.

But the basi-occipital, basi-sphenoid, presphenoid, ethmoid, and vomer of Man being now accounted for in the Pike's cranio-facial axis, what, it may be said, is the nature of the bone *x* to which the term "basi-sphenoid" is commonly applied?

It differs from any of the ossifications of the basi-sphenoidal cartilage in Man, not only by extending backwards beneath the basi-occipital, but by stretching forwards beneath the presphenoidal and ethmoidal cartilages to within a short distance of the anterior extremity of the cranium; and in the still more important circumstance that it is an ossification within the perichondrium, which can be stripped off, in skulls which have been macerated or steeped for a short time in boiling water, without injury to the cartilage upon which it is developed.

Mr. Parker has shown in his valuable paper on *Balæniceps*(a) that the so-called basi-sphenoid of birds is developed from three ossifications, a central one, the true basi-sphenoid, and two lateral and inferior centres—the "*basi-temporals*" (Parker), which appear to correspond with the *lingulæ* of Man.

The thought readily arises that the single bone *x* may correspond with these two basi-temporal ossifications. The latter, however, appear to be cartilage ossifications like the *lingulæ* themselves: and, upon the whole, I think it will be safer, at any rate for the present, to regard the bone *x* as peculiar to the branchiate vertebrata, and to confer upon it the special name of "*para-sphenoid.*"

Connected with the bones of the basi-cranial axis are upper arches, and, as in Man, the hindermost of these arches consists of three elements, two of which are lateral and one superior. Each lateral bone articulates below with the basi-sphenoid, and forms the lateral boundary of the occipital foramen. Above, it unites with its fellow for a short distance, and so constitutes the upper boundary of that foramen, shutting out the superior bone from any share in its formation. Except in this point, it will be observed that the three bones quite correspond with the exoccipitals and supra-occipital (*S. O.*) of Man. The exoccipital (*E. O.*), however, further differs from that of Man in that it is perforated, and not merely notched, by the foramen for the eighth pair, and that it is produced in front of, and external to, this foramen, so as to enter largely into the chamber which lodges the lower and posterior part of the organ of hearing. Furthermore, there is no perforation for any hypoglossal nerve, that nerve not being represented in a distinct form in the fish.

FIG. 23.

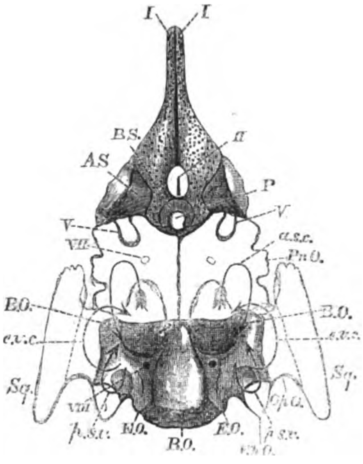

FIG. 23.—The basal and lateral bones of the skull of a Pike viewed from above. The squamosal and the three periotic bones are left unshaded. *P*, the pituitary fossa.

In the Pike, no bony wall separates the membranous labyrinth from the cavity of the skull, the periotic ossifications being all situated, as they are when they first appear in Man, upon the outer side of the capsule of the labyrinth; and this capsule is still less complete than that of the human fœtus, seeing that its inner wall is not even cartilaginous, but remains in the condition of membrane. Notwithstanding the comparatively incomplete condition of the periotic bones of the fish, however, they are as clearly and distinctly identifiable as any bones of the skull.

The large bone, *Pr. O.*, which occupies a great part of the wall of the cranial cavity, in front of the exoccipital, has its front margin deeply notched for the exit of the third division of the trigeminal. It presents a foramen through which the portio dura passes; it protects the anterior part of the vestibule and the anterior vertical semicircular canal. In other words, it has exactly those relations to the auditory organ and to the cranial nerves which especially characterise the pro-otic ossification of Man—which, it will be recollected, also protects the anterior part of the organ of hearing, lies behind the exit of the third division of the trigeminal, and is perforated by the portio dura.

In minor respects, on the other hand, the pro-otic of the Pike differs from that of Man; as, for example, in its vast proportional size; in its remaining distinct from the other periotic bones; in the wide ossification which extends from it over the basal cartilage of the skull towards the middle line; and in coming into contact with the ex-occipital and basi-occipital behind. But none of these modifications really interfere with the homology of the bone—which we shall find to be identifiable by the same essential characters throughout the vertebrate series.

The epiotic element is not less distinctly recognisable. The upper and lower crura of the great posterior vertical semicircular canal traverse notches in the supra-occipital and ex-occipital respectively, but the summit of the arch of the canal is inclosed within a distinct conical ossification, the "external occipital" of Cuvier. This ossification is, in fact, perched upon the posterior vertical semicircular canal, just as the human epiotic ossification is perched upon the summit of the arch of the same canal when it first appears; and if the semicircular canals of man were to grow in the same proportion to the brain case as those of the fish, the epiotic would be carried out as far, and would leave a considerable space between the pro-otic and itself, into which the adjacent supra-occipital and ex-occipital bones might intrude, as they do in the fish.

The third of the periotic ossifications—the opisthotic—seems at first not to be discoverable in the Pike. But in some specimens of this fish, and in a great many other fishes, there is a distinct bone (which is particularly large and conspicuous in the Gadidæ) connected below and behind with the ex-occipital, in front with the pro-otic, internally and behind with the epiotic, and externally with the squamosal. It enters especially into the outer and posterior wall of the labyrinth, and protects a great part of the external semicircular canal, sharing this function with the pro-otic.

(a) *Transactions of the Zoological Society*, vol. iv.

As there is neither *fenestra ovalis* nor *rotunda* in the fish, and as it is by no means certain whether the sacculus does or does not correspond with the cochlea of the higher vertebrata, some of the best marks by which the opisthotic may be identified are wanting; but the relations of this bone to the other periotic ossifications seem to me to be decisive as to its real nature.

The periotic bones being thus identified, they are all eliminated from comparison with the proper supero-lateral constituents of the cranial arches. And there remains only one bone in the lateral walls of the Pike's cranial cavity which can answer to any of these, which is that marked *z* in Figure 21, *A.S* in the other figures.

This bone has the form of a triangle, with its apex turned downwards. The hinder side of the triangle abuts against the anterior margin of the pro-otic, and closes the trigeminal notch in that bone anteriorly. The front margin ends in the cartilaginous side walls of the skull; the apex approaches, but stops a little short of, the lateral wing of the Y-shaped bone, or basi-sphenoid. The relations of this bone are therefore essentially those of the alisphenoid, though I think it quite possible that the orbito-sphenoid may, to a certain extent, be represented by its anterior portion.

The bones which enter into the roof of the skull (Fig. 22) remain for consideration. Of these, the supraoccipital, which has no additional constituent comparable to S.O′ in Man, has already been mentioned. It articulates in front with two very large and long bones (Fr.), separated by a median suture, which narrow in front of the orbits and end in a point beyond the nostrils, and but a short distance from the extremity of the snout. The supra-occipital lies between, and separates two other comparatively small and insignificant bones (Pa.), which are situated between the posterior edges of the parietals and the epiotics, and, strictly speaking, do not enter into the roof of the cranial cavity at all. Of these two pairs of bones, the anterior represent the frontals of Man, and the posterior his parietals. The position and proportions of the bones are, indeed, remarkably altered; but we shall find by-and-by, that these very variable cranial elements undergo almost as great changes of proportion and relation even within the limits of the Mammalian class.

The three bones which correspond with the *pars petrosa* and *pars mastoidea* have already been identified. In Man another element, the squamosal, situated above and external to the pro-otic and opisthotic enters into the composition of the temporal bone. In the Pike there is a corresponding bone, which forms the external and posterior angle of the skull, and lies above and external to the pro-otic and opisthotic, being usually anchylosed with the latter. The under and outer surface of this squamosal bone contributes towards the formation of the articular facet for the suspensory apparatus of the lower jaw. There appears to be no ossification in the ethmoidal cartilage, which answers to the *lamina perpendicularis* of the ethmoid. But, separating the orbits from the nasal chambers, there is on each side of the frontals, and partially overlapped by them, a bone which helps to bound the hinder wall of the nasal chamber, which lies external to the olfactory nerve, and which is in immediate relation with the nasal division of the trigeminal nerve. This is the bone termed "pre-frontal" by Cuvier, and it obviously corresponds with the lateral mass of the ethmoid in Man, which, in like manner, enters into the wall of the olfactory chamber, lies external to the olfactory nerves, and is traversed by the nasal division of the fifth.

Thus far the bones entering into the composition of the Pike's cranium (with the exception of the "para-sphenoid") have been identified without much difficulty with those met with in Man. But there remain several others which seem to be without human homologues. These are, firstly, the bones called post-frontal, *Pt.f.*, which form the posterior, superior, and external angles of the orbits, and are wedged in between the ali-sphenoids and the pro-otics; secondly, the bones marked 1 and 2, developed upon the ethmoidal cartilage external to the points of the frontals. The pair 1 1, which immediately overhang the external nares are probably to be regarded as the nasals of Man; but the nature of the second pair, 2, which lie internal to them, and extend to the end of the snout, is doubtful. Still less does there appear any reason to identify the bones 3 3, which are minute triangular ossifications in the substance of the cartilage between the bones 2 2 and the vomer, with any which exist in Man. I consider them to be peculiar to the fish.

And now to sum up, in a few words, the structure of the brain case of the Fish. We find, as in Man, a posterior *occiptal* segment, consisting of basi-occipital, ex-occipital, and supra-occipital; a middle *parietal* segment, consisting, as in Man, of a basi-sphenoid, ali-sphenoids, and parietals, but in which the latter, in consequence of the disproportionate size of the frontals, are thrown far back out of connexion with the ali-sphenoids; and, finally, an anterior, or frontal segment, of which only the frontals are separately distinguishable in the osseous state. The orbito-sphenoids and the presphenoid are alike represented only by cartilage and membrane, unless, indeed, as has been suggested, a part of the ali-sphenoid may take the place of the former bones.

Of the bony elements connected with the sense capsules in Man, the pro-otic, opisthotic, and epiotic, together with the squamosal, have been clearly identified in the Pike; as have the pre-frontals and the vomer.

But certain bones present in Man have not been recognised in the Fish; while, on the other hand, certain bones present in the Fish appear to have no representatives in Man.

Thus, while the study of the cranial structure of the Man and the Pike reveals a fundamental identity of composition between the two, it demonstrates the existence of a no less marked diversity, each type exhibiting structures and combinations peculiar to itself.

INJURIES TO THE EYE FROM MECHANICAL AND CHEMICAL AGENTS, AND THE TREATMENT.

BEING SELECTIONS FROM A COURSE OF LECTURES ON DISEASES OF THE EYE.

By HAYNES WALTON,
Surgeon to the Central London Ophthalmic Hospital, and to St. Mary's Hospital; late Teacher of Anatomy and Demonstrator of the Surgical Operations in St. Mary's Medical School.

Blows—Wounds.

A blow on the eyeball may injure or destroy sight without leaving any external trace of violence, yet, when the seeing power is much damaged, there is generally some external symptoms of change or degeneration of some of the ocular tissues, especially after the lapse of many months. The pupil may be dilated, the iris changed in colour and tremulous, the eyeball soft from fluidity of the vitreous humour, the lens opaque: with any of these states entire atrophy may ensue. Prognosis in a recent case cannot be made from any of the physical conditions of the conjunctiva, redness, ecchymosis, or chemosis, but may be on the state of the sight, for when that is not affected there is little to fear, and certainly nothing if the cornea be clear and the iris bright.

But the worst effects as regards sight may result from a blow on the eye-brow, or, indeed, a very severe blow on any part of the head. Till lately we had no proper explanation of this as regards the effect on the eyeball. When there was no evidence of inflammation it was attributed to concussion of the retina and to other causes which have no existence. We now have demonstrable causes, and so general is this that I have not met with a single exception. Actual and perceptible alterations are found in the interior of the eye, sometimes accompanied with external symptoms, sometimes not. Among these physical changes are detachments, more or less, of the retina, hæmorrhage of it, and lacerations of it posteriorly, extravasation of blood, especially into the vitreous humour, dislocation backwards of the crystalline lens. Inflammation of the retina and the choroid, with the usual consequences of such a state, are often met with. It is in this way the eye suffers indirectly, that is, when the violence has been received in its vicinity. Of course, such positive information cannot be established without the application of the ophthalmoscope, the actual and general use of which is far less difficult to learn than is generally supposed. But there is this necessary condition, that the learner should have a number of cases to examine without any long intervals. The quicker the succession the more readily are the pathological states recognised, compared, and remembered.

Whether the retina be detached as the immediate consequence of violence to the eyeball, or secondarily raised by serum through morbid changes consequent on inflammation at the fundus; or, when it is torn, the eye is irretrievably spoiled. The same may almost be said when there is any extensive extravasation of blood in the retina from mechanical violence. Recovery can only be very exceptional.

Blood extravasated into the vitreous humour is far less hurtful to the eye than might be imagined,—extensive effusion being often absorbed, and a useful organ remaining. But as recovery, so far as sight is concerned, must depend chiefly on the integrity of the retina, it is impossible, while the vitreous humour is yet obscured, to form anything approximating to a correct diagnosis. With much immediate loss of vision, I should regard the case as very unfavourable.

When the fundus of the eye has taken on inflammatory action, there is always danger of damage to the tunics involved, and the degree of which is to be rated by the existing power of sight at the time the patient is seen after the accident. The longer the function is delayed, the less is the probability of restoration.

To some positive physical change therefore do I refer the loss of visual power consequent on blows on the eye itself, or about the head. When the eyeball itself has received the force, there is no difficulty in associating them as cause and effect, but there certainly is in considering them as such, when the edge of the orbit merely has been struck, or still less when the head has been. In one instance, in which both retinæ became detached after slow inflammation within the eyes, the cause was undoubtedly a severe blow on the top of the head. The cerebral functions were not damaged. In another, of the same lesion in one eye, the young man fell from a cart, and struck the side of his head.

The present system of compensation from railway accidents induces many unprincipled persons to seek payment for injury to sight when they are not so injured, and, fortunately for justice, the ophthalmoscope assists us to expose fraud. It has fallen to my lot during the last six years to be consulted on many such cases of feigning. As the result of my observation and investigation, my present conclusion respecting alleged damage to the eye from accidents in railway carriages is this, that if disturbed vision is complained of, and the eye appears healthy when inspected by the ophthalmoscope, and there is no direct proof of a blow on the head, and no evidence of there having been loss of consciousness, although only for the shortest period, I should suspect imposition. The general character of the individual, his position in life, his circumstances, and his associates, are all to be taken into account when there is any doubt respecting his statement.

Enough has been said to direct attention to the general character of these accidents, and to put you on the proper road for inquiry, and to show the necessity for examining such cases with the ophthalmoscope.

When impaired vision at once follows an injury, unaccompanied by external lesion, I prescribe quiet for a few days, unstimulating and rather low diet, except it be contra-indicated, cold to the eye, either by the douche or a thin rag dipped out of cold water, and frequently changed. Should pain supervene, I generally give an aperient; besides this, I employ opiates, at first locally, and afterwards, if necessary, internally. No other treatment can be employed more likely to prevent further effusion of blood, or of any secretion, should these be poured out, or to hasten their absorption; nor is there any more effectual way of stopping the development of inflammatory action.

When there is more extensive disease, that is, when there is swelling of the eyelids, especially the upper one, pain, or flashes, scalding tears, accompanied by a hard pulse, acute disturbance of the digestive organs, and feverishness, or restlessness, or want of sleep supervene, we may be sure that very great disturbance exists, and that the integrity of the eye is threatened. There is now inflammation of the eyeball. It must ever be remembered that a given amount of injury to any part of the body is, as a rule, followed by a certain amount of action, and that the eye can scarcely receive a severe and rudely-inflicted hurt without marked local and general disturbance, the contrary being the exception. A reparative stage is set up or attempted, a curative influence which we cannot stop, and that we interfere with legitimately only when we soothe and endeavour to keep it within certain bounds. If we attempt by heroic measures to inflict what has been called a "wrench" on the system, and suddenly to shut out all natural attempts, we shall fail, and, besides, damage the patient. The treatment of inflammation of the eyeball is a very important subject. I shall reserve what I intend to say on it till the next lecture, when I intend to finish the subject of injuries to the eye.

Blows of the eyeball attended with rupture of the external coats, or laceration of them, or dislocation of the contained parts, are generally, but not always, followed by loss of sight.

When bursting occurs, the rupture is almost universally in the sclerotica, just under the upper rectus muscle, or the internal one. The vitreous humour is apt to escape, and the choroid and the retina may be more or less prolapsed. I have seen profuse hæmorrhage from this accident.

Loosening of the crystalline lens, or more commonly displacement of it, is another effect of blows on the eye and on the head. Dislocation of it forwards is that most usual; and it may be either alone, or in its capsule. The lens may get fixed in the pupil, but rarely for any length of time, since it either falls against the iris, or, what is more likely, into the anterior chamber. Pain is the usual concomitant of any form of this accident. It may exist with little or no inflammatory action. Sometimes it is of an intensely neuralgic character, portending destruction of vision, not only in the eye, but about the orbit and head. Acute inflammation mostly supervenes, and the eye is destroyed.

But the lens may lie in the anterior chamber without any untoward symptoms, and I may state at once that most assuredly, if no irritation were set up, I should leave it alone, and trust to absorption. Even with slight local disturbance in a patient under forty years of age, I should not interfere. Above forty, when the fibres increase in density, and absorption of them cannot quickly occur, I should make the earliest symptoms of irritation the signal for action. A dislocated lens and capsule should be removed from the chamber at once, that is, so soon as there is assurance that the capsule is present, for months and years may pass away before absorption occurs; and even were it to be effected before the eye has been destroyed by inflammation, the capsule might prove a source of much irritation, and perhaps become the seat of calcareous deposit.

Sometimes a blow produces a rent in the sclerotica, while the conjunctiva remains intact, or but slightly torn, and the crystalline lens is forced out of the eye, and rests between these in close proximity to the cornea, constituting what is called "external dislocation of the lens. With this the iris is more or less paralysed or torn, and a portion, I believe, always carried out with the lens. Much blood is effused within the eyeball, yet vision may not be lost. The removal of the lens is the proper course.

The iris is apt to suffer from blows on the eye, to be torn, and even to be more or less separated from the ciliary attachment. I have several times witnessed partial detachment, so that a second pupil was formed, and I have seen a few instances of splitting from the pupil to the circumference, with partial detachment of the flaps. It may be torn away from corresponding parts of the circumference, leaving a central strap without any trace of pupil.

Now, while I recognise, I hope sufficiently, the immense power of natural reparative action, and the danger of thwarting or interfering with it, I am no less sure that much is either lost or gained, according as there is no treatment, or as judicious means are used. Fortunately, there is no call for the exercise of critical knowledge, or of accurate diagnosis, nor is an intimate acquaintance with ophthalmology needed. Nothing more is wanted here than attention to the first principles of Surgery.

We should not allow any extent of injury short of actual collapse to destroy hope of being able to restore an eye to some degree of usefulness. Many a golden opportunity is lost simply because in the first instance a case has been thought hopeless. To strengthen my assurance, I would add that physical repair and degrees of functional restoration are now and then almost incredible, and even surprise those practically well versed in Surgical diseases of the eye. In the earlier years of my practice I published several of these wonderful recoveries in the weekly periodicals.

It must not be expected that perfection can be recovered after much mechanical lesion, including the loss of the lens; but I need not stop to show that an eye with even imperfect sight still possesses relative and absolute value.

If the direct inflammatory effects of an injury are quickly got over, the chances of the other eye ever suffering from irritation are immensely lessened. If inflammation linger, many of the tunics are involved, pathological changes ensue, and the other eye is threatened.

Adaptation, as nearly as may be, of divided parts, slight sustaining pressure, local and general rest, are the things indicated, and the objects to be accomplished.

When I see a patient soon after an injury, I make no further examination than is needed to ascertain its nature, to be assured of the line of action required, and to be able to form a tolerable prognosis. Taking care to remove, by washing or otherwise, all extraneous substances, I close the eyelids, and keep them shut by one or two strips of court plaster; this fulfils the first two indications, adaptation and slight sustaining pressure, with the great addition of excluding the atmosphere. When the accident is severe, I enjoin rest of body, and disuse of the other eye. The quicker the union of the wound, the more certainly is the desired object gained, the more perfect the result, and the less the suffering.

It is positively hurtful to apply stimulating lotions; soothing and not irritation is needed. Swelling of the conjunctiva—chemosis as it is called—is the inevitable result of an injury, and readily passes away. Sometimes it may be well to incise it. The frequent use of the water, or a cold lotion applied with a rag sufficiently thin to allow of evaporation, is most advantageous; and if much pain exist, the addition of some preparations of opium will generally afford relief. Now and then warm applications are more grateful, so that the use of either must often be discretional. Opium to produce sleep or relieve pain may be indicated. When I desire a prolonged or continuous effect, I give it in very small quantities, and repeat the dose often; so that although in the end as much might be prescribed, a far better result is obtained. This affects the patient's system sufficiently, and keeps it so influenced without that knock-down, prostrating result so likely to follow the large dose. Cases are met with in which nothing but the local abstraction of blood will give ease.

But what is to be done when the iris is more or less prolapsed through the cornea, or, perhaps, through the sclerotica? The latter state is the more common. Most assuredly, as a rule, the less that is done the better. But very seldom indeed can it be necessary to interfere. I have a few times thought it prudent, from the amount of the prolapse, from the large bit that was hanging out, to reduce the flap with a pair of scissors, and so to endeavour to lessen or prevent irritation; but I repeat that, in general, nothing of the kind is needed. By a natural and safe process, whatever is superfluous and not wanted in the progress of plugging and cicatrisation is removed. The application of nitrate of silver cannot be beneficial. I know that it destroys primary cicatrisation, and, besides, increases inflammatory action by irritating the eye, so that it is doubly hurtful. I say this after much investigation of the subject and a thorough conviction. In ulceration of the cornea the iris often protrudes in a bladder-like form, being pressed forwards by the aqueous humour; it is then often advantageous to puncture the protrusion and produce collapse. I have not, so far as I remember, met with a parallel example from an injury.

Constitutional treatment must not be neglected, and all measures likely to prevent or to reduce acute or chronic inflammatory action must be attended to.

When it is clearly ascertained, however early, that a wounded eye is decidedly lost, and that the secondary action is suppurative, and attended with pain and constitutional disturbance, a portion of the eyeball should be removed; a mere incision will not answer; or excision, after Dr. A. Ferrall's plan, adopted. Possessing such means for safe and instantaneous relief, and by which, besides, the greatest protection is afforded to the other eye from sympathetic ophthalmitis, we ought not to allow a continuation of suffering and prostration which no other treatment will check, and which ceases only after certain constructive morbid changes in the lost organ.

Abrasion, or wounds of the corneal surface, whereby the epithelium is scraped, is, mechanically speaking, the slightest of corneal wounds, and generally of little import; but it may produce inflammation of the eyeball. I have had long and troublesome cases by infants scratching their mothers' eyes. A drop of oil is a comforting application to the recent accident. In severe instances the eye should be kept closed till the epithelium has been restored, cold applied, and the progress closely watched.

Suppuration in the cornea, as the consequence of a scratch, or a blow, or impactment of a foreign body, is always perilous. It may appear very quickly, and at first with but little, generally with none or very little inflammatory implication of the rest of the tunics. But, whatever be the accompanying symptoms, the eye will hardly escape much damage through destruction of the corneal texture. The slightest deposit of pus, a mere speck, should be regarded with the gravest prognosis. It would serve no useful purpose to describe minutely the pathological appearances. I have tried myself, and seen tried, the antiphlogistic plan, including mercury, and with such bad results, that I have ceased to employ it. I have faith in the opposite, or tonic system, and this in accordance with common sense and modern therapeutics, as the sufferers are generally enfeebled. I enjoin absolute rest of the body and cessation from mental labour. Soothing applications are the only useful local ones. These means, with full recognition and attention to any deranged general state of health, will, I believe, give the best results.

ORIGINAL COMMUNICATIONS.

CASES OF EPILEPSY, CONVULSIONS, GIDDINESS, ETC.

PART OF A SERIES ILLUSTRATING AFFECTIONS OF THE NERVOUS SYSTEM, OF ORGANIC AND INORGANIC ORIGIN, WITH CLINICAL AND PATHOLOGICAL OBSERVATIONS.

By JOHN W. OGLE, M.D., F.R.C.P.
Assistant-Physician to, and Lecturer on Medical Pathology at, St. George's Hospital.

(Continued from page 213, New Series, Vol. XIV.)

THE last case which I related in this series was one of what I ventured to term "infantile epilepsy," arising apparently from irritation of the stomach and bowels, in consequence of inappropriate feeding. Those which I beg to adduce on the present occasion are cases in which attacks of a kindred nature took place, chiefly in delicate, ill-nourished subjects, in connection, as it would appear, with the process of teething, or the irritation produced by the presence of intestinal worms.

Case 16.—Henry B., aged one year and nine months, had had hooping cough fourteen months previously. For twelve weeks he had suffered from "fits," which varied in duration from one or two up to ten minutes, in which he was described as becoming "black in the face," and losing his senses, but *not* struggling. In "coming to," he sometimes screamed much. At first he had as many as fifty or sixty small ones in a couple of days. When I first saw him he sometimes passed a week (not longer) without any. No good had followed lancing of the gums, but yet the patient was obviously cutting the teeth, and two weeks previously he had much pain in the head, with swelling and flushing of the face. Worms had been looked for in the evacuations, but none found. He had never been able to walk, but at one time could stand alone. During sleep the hands were wont to become clenched. Ordered the tincture of belladonna in half-minim doses, along with plain water every six hours, and castor-oil occasionally. For eleven days the child went on without any attacks. As the gums appeared unusually swollen, I then had them lanced. The attacks, however, recurred more frequently, and the face was much swelled. Ordered half drachm of the syrup of iodide of iron, with cod-liver oil, twice a day. After going on with this for a fortnight, during which time the attacks continued at the rate of about one per diem, there was a complaint of the urine being scalding when voided. I could detect nothing wrong in the urine, neither lithic acid, mucus, nor albumen being present. Ordered small doses of the bicarbonate and nitrate of potash, and occasional doses of hyd. c. cretâ, and pulv. rhei. The urine was passed more freely, and without uneasiness, and I therefore resumed the iodide of iron. This was persevered in for six weeks, during which time the attacks became much less frequent and severe; but at the end of that time the mother ceased to bring the child, and I saw it no more.

Case 17.—Alfred E., aged 13, a delicate-looking lad, had been subject to epileptic attacks for above a year, occurring every week, and oftener more frequently. It was known that he was troubled with the "thread worms." Ordered calomel and compound scammony powder every other night, and haust.

cinchonæ acid twice a day. At the end of five weeks, under a continuance of the above treatment, it was reported that there had been no attacks of the convulsions for three weeks. The powders and the medicine were continued for five weeks longer, during which time no attacks whatever occurred. He then had given to him steel wine and quinine, which were continued for three weeks, and he was discharged, about eleven or twelve weeks after being first seen, as being apparently well, no further attacks having taken place.

Case 18.—Christopher R., aged 10 months, pale, very thin and delicate-looking, with slight "cough and wheezing." Had for the first time in the previous week two strong "fits," in which he screamed much, and became "black in the face." There was no appearance of the gums as if any tooth was coming, and no worms were known to exist. He was described as being "ravenous for food." Ordered a calomel and compound scammony purge, and a citrate of potash saline with five minims of the ipecac. wine every four hours. At the end of the week he was much better. No worms had, however, been found. He then took cod-liver oil and syrup of iodide of iron. At the end of two weeks there had been no fit; but in the third week there was one fit, and it appeared as if a tooth was coming, but it did not protrude. He progressed well for another month, getting strength and fatness, and having no more attacks whatever. Discharged as being well.

Case 19.—Emily D., aged 7, healthy looking, and of healthy family, had been for one month the subject of pains in the head, unattended by any vomiting. Within five days she had had seven "fits," the left side of the body being chiefly affected. No known cause of illness existed; not hereditary. Worms had been looked for, but none had been detected in the evacuations. On the previous day she had had three fits, and one on the day when seen. The attacks occurred for the most part, but not entirely, during the day. Had not been subject to fits in earlier life. Ordered scammony and calomel twice in the week, and the vinum ferri twice a-day. Thread worms were passed under the use of the aperients, and the attacks became less frequent. After three weeks' continuation of the treatment, I never saw the child for above two years, when I found that she had been subject to the attacks since her former visits to St. George's Hospital, and that the thread worms were still passed, and in large numbers. It was, moreover, believed that the child always had a warning of the attacks, a "working of the eyes," and pain at the stomach, *and that there was always a squint of the eyes before they came on.* There had been no biting of the tongue and no foaming at the mouth. After the attacks she could not speak for ten minutes, but said she "always knew what was going on." Calomel and compound jalap powder every other morning, with haustus quinæ twice a-day were given. Subsequently the latter was exchanged for quinine and iron. The attacks continued much about the same during the month for which the patient was under treatment, the squinting and "working of the eyes" coming on before the attacks. At the end of that time the patient ceased to attend, and was lost sight of.

Case 20.—Walter N., aged one year and a-half, healthy-looking, and of a healthy family. When cutting teeth two months ago, became subject to convulsions, which had come on frequently every week since, giving rise to great anxiety by their violence. There was some appearance of swelling of the gums. Ordered that the gums should be lanced, and a mixture every four hours of syrup of poppies and bicarbonate of potash in pimenta water. The gums were lanced, and three new teeth appeared forthwith. After this the convulsions ceased, and, excepting a powder containing a small quantity of rhubarb, magnesia, and hyd. cum cretâ given occasionally at bed-time, no further treatment was required.

Case 21.—Julia M., aged 1 year, delicate-looking, family healthy; head somewhat large, as it was said always to have been; fontanelles closed. Had always from birth slept with the eyelids somewhat apart (as did her brother.) Was in good health until she had an attack of bronchitis three weeks before, when she became the subject of "screaming convulsions," and when seen was described as having "a particular cry," of a squeaky character. It was said that during sleep the "fingers were much drawn up." There was no cough. The evacuations were very offensive, and she had taken castor-oil. She was said to be "about" her teeth, but the gums were not particularly swelled. Cod-liver oil and steel wine were ordered twice a-day, and small doses of hyd. cum cretâ every night were given. This treatment was continued for two weeks, and at the end of that time the powders were discontinued. The so-called "convulsive attacks," nevertheless, continued at intervals. After five weeks she was said to be decidedly much improving, and to have "got one eye-tooth through, and another all but through." The treatment was persevered with, and two more teeth were cut. During one week the mother said that the right side of the head had been noticed as "projecting," but nothing unusual was observable. At the end of four months the patient was discharged as being apparently well; she still continued, however, to sleep with the eyelids partially open as before.

Case 22.—R. T., a boy, aged 14 months, of healthy parents, but delicate in appearance, and with the lymphatic glands in the neck very large. Has been weaned three weeks. When teething three months ago he had several attacks of "convulsions;" had had none since, but when crying always "had a hooping noise" during inspiration. Had cut six teeth. I gave him cod-liver oil and steel wine—a dram of each twice a-day, and castor-oil every other morning. This treatment was continued for five weeks, and was only varied by the use of one or two doses of rhubarb and hyd. cum cretâ. He gradually and entirely recovered from the peculiarity of the breathing—*i.e.*, from the spasmodic condition of the larynx during inspiration.

Case 23.—Thomas P., aged 11 years, pale, delicate, and languid-looking. Family history good. About one month ago, at 7 a.m., was seized, without ostensible cause, with pain in the belly, which continued for some time, and then he "lost his senses" and power of speech for about twenty minutes. Ever since then he had been subject to "fits" every other day; these came on without any warning, and were almost always followed by a strong sleep. At first, the attacks began with a "biting of the finger nails." Latterly they had for the most part lasted about two hours. The patient also had a slight jerking of the muscles of the face at times, and thread worms had been seen occasionally by the mother; *the left eye was noticeable as smaller than the right one;* the urine was found to be free from albumen. There was no affection of the muscles of the limbs; the special senses were unaffected; the pupils acted well, and were equal. I prescribed calomel and the compound jalap powder and occasional doses of senna. A few ascarides were reported as having come away with the aperients. In ten days' time the report was that the patient had only had one attack since the treatment was begun. I then left off the regular exhibition of aperients, and gave small doses of the trisnitrate of bismuth and ginger twice a-day, before food, and a dram of the syrup of iodide of iron night and morning, with only an occasional aperient. During the next two weeks no worms were passed, and no "fits" occurred. He then became affected with what were termed "faints," which were probably from transient giddiness, lasting only a minute or two. For two months he continued under observation, and with the same treatment. The "fits" and the "faints" quickly abated, and left him altogether. Discharged as being apparently well.

Case 24.—Anne T., aged 8½ years, delicate-looking. Family history good. For some weeks been subject to a "twitching" of the right side of the face, coming on at any time of the day. She had had no serious or severe illness; no discharge from the ears; no worms known to have been passed by the bowels; no albumen in the urine. Ordered calomel and compound scammony alternate mornings. After four days it was reported that she had had no twitchings, but no worms had been evacuated. In three weeks she was discharged, after going on with the vinum ferri twice daily, as being apparently quite well.

Case 25.—E. J. J., aged 2¼ years, of somewhat delicate appearance, had been the subject of eight or nine "fits" daily for the space of one year and a half, following an attack of scarlet fever and ulcerated throat. He had never walked, nor talked, nor sat up, and had always been fed by the breast and by the bottle. *The "fits" were generally foretold by attacks of laughter,* lasting for some minutes, and at times for hours, and he generally bit the tongue and foams during their occurrence. There had been no discharge from the ears, and nothing unusual was observed as regards the shape, appearance, etc., of the head. He was subject to "thread worms," and was of a costive habit. Ordered calomel and compound scammony powder, and the syrup of iodide of iron, twice a day. After this, for three weeks, he had no attacks whatever, and the cod-liver oil was added to his draught twice a day. The attacks recurred, occurring daily for two or three days, and then ceasing for a time. He then took small doses of the liq. hydr. bichlor. in the infusion of quassia. As the attacks continued, he was again put upon the original treatment with the calomel and scammony powders, and with decided benefit. The gums were also lanced, but without the appearance of new teeth as a result. After persevering with this treatment for six months, the report was, that the "fits" were much "lighter," and that their advent was generally indicated by a *clenching of the hands and fingers, and heat of the head.* Sometimes the attacks were accompanied by "screaming," and sometimes they went off with "laughing." At last a month passed away without the recurrence of any fits, the patient taking the cod-liver oil twice a day. He began to crawl about, which he had not done before, and at last to sit up firmly, and he discontinued attendance at the Hospital, as being in all respects apparently well.

Case 26.—Thomas H., aged 10 years, of healthy family, having nothing of importance observable about him, had been for some weeks subject to "weakness" and "giddiness," and to a slight cough. The left pupil was noticed as being larger than the right one; the sight was good. The bowels were generally confined. Worms were suspected, but had never been seen. Ordered calomel and the compound scammony powder, and the syrup of iodide of iron, with glycerine and infusion of quassia. A large number of thread worms were evacuated. The boy continued the same treatment for four weeks, by which time the giddiness had quite left him. The irregularity of the pupils, however, still remained.

(To be continued.)

CASES OF SEVERE AND FATAL VOMITING IN PREGNANCY.

By J. LANG, M.D.

About the last week in May, 1824, I was requested by Mr. J. Lang to visit with him Mrs. ——. She was about 34 years of age, very *petite;* the smallest woman I have ever seen, more like a girl of 12 or 13 than a matron with a numerous family. She was beautifully moulded, well-formed, nicely filled up, yet not fat. She had had many children. First, a miscarriage, before which she had suffered very much from sickness; then two girls, and subsequently many boys, four of whom were then living. It had been remarked that the sickness, frequently an attendant on pregnancy, had been unusually severe during the gestation of the male children, and the miscarriage before alluded to had been attributed to that cause. She usually had quickened very late, not often before the commencement of the seventh month, and although the sickness was usually mitigated by that event, it was still severe. The sickness in the present case was excessive, no one thing remained but a minute or two on her stomach. Dr. Robert Marshall had been joined in consultation, and numerous remedies had been tried without avail. From certain circumstances, an opinion prevailed in her mind that the nurse or some other person might have tampered with the diet, or with the remedies, before being given to her. It is impossible now, nor was it possible even then, to ascertain how this suspicion arose in her mind, but it preyed on her mind, and depressed her spirits very much. Mr. Gervis, of Ashburton, an old and esteemed Practitioner, lent his aid. She was very much attenuated. The great majority of the things prepared for her was under my superintendence, and even then a portion was always swallowed by some one before she would taste or even look at it. What she ejected was carefully examined without avail; the most sensitive tests failed to discover anything deleterious. The emaciation was extreme, and it appeared abundantly evident that, unless something was speedily devised to check the sickness, death from inanition must speedily take place. It was now, on June 20, determined to consult Dr. Blundell, of Guy's Hospital; the case was fully described. Especial attention was solicited to the very fragile form, now exceedingly attenuated; the extent of the sickness; the instant rejection of every thing by the stomach; and suggested whether it would not be advisable to induce abortion.

Dr. Blundell hesitated in his opinion, and required further information. The information required was given, and the urgency of the case was repeated.

Further delay for a week or two was recommended, until etc., etc. Death stepped in to fill up the chasm.

Mrs. —— died on July 10. She slept away so quietly that the exact moment of dissolution was not known.

Case 2.—In January, 1825, I was requested to see Mrs. ——. She was of middle size, about 23 years old, fresh complexion, and looking the picture of health; married about six months; was the mistress of a very large household; good and cheerful temper, but very impulsive. She had been regular to the day, and did not consider that she was pregnant. She had been sick after eating anything, almost constantly, for some months, until the ingesta were thrown off. Now she had rushed forward to rescue something about to fall, much hæmorrhage came on, and I was sent for. A miscarriage soon took place, and her recovery was rapid. Some six months after, my attendance was again requested. Mrs. —— was regular almost to the hour; the bowels gently open; the general health good; but the sickness very frequent. Circumstances rendered it very desirable that she should have a living son. Some ten days after my interview with her, Mrs. —— took a ride with her husband; they were caught in a shower, and cantered home. Mrs. —— was sick twice.

A few hours after the ovum came away, accompanied by severe hæmorrhage. Recovery took place tardily, and a removal to the sea side with bathing was recommended. Mrs. —— was by the sea six or eight weeks, and returned pretty well. The opportunity had been taken to dispose of her horse, and an easy-going gig had been substituted. Some months after I was requested to call on her. Her health was good, the menses almost to the hour, but the sickness had come on, and was frequent and severe. It was presumed, with some reason, that Mrs. —— was again pregnant, and she was again fully cautioned. It was now the harvest, Mrs. —— went over to the mowhay. A small girl, about three years old appeared to be in danger, Mrs. —— rushed from her chair and caught up the child. She felt faint, and something slipped. A couple of strong men carried her, seated on the chair, up to her bedroom. I was soon in attendance, but the ovum had come away, and there was severe hæmorrhage. It was a male child. The recovery was tardy but continuous. It wanted but a day or two of a twelvemonth when my assistance was again requested. Sickness very continuous after taking in any food, until it was ejected. The menses very regular. Mrs. —— was very much alarmed. Absolute repose was enforced; and it was suggested that Dr. Marshall should meet me in consultation. It was determined on that the recumbent position was imperative, and on a mattress; eight ounces of blood to be taken from the arm; gentle aperients if necessary; a very moderate diet, with an avoidance of more fluid than was absolutely necessary; and, above all, a steady and experienced nurse, to whom Mrs. —— was much attached, was engaged for the next four months to be with her. It was now about the end, presumed, of the fifth month, and quickening, as likely to alleviate the sickness, was looked forward to daily. One day Mrs. —— was supported from her bed for a necessary purpose, and had been out but a few minutes when she uttered a slight scream. She was immediately lifted on to the bed; the ovum had come away, followed by an immense hæmorrhage. Mrs. —— never rallied, and died in less than half an hour, a minute or so after I had entered the room. All these four were male children.

Case 3.—On April 17, my opinion was solicited on Mrs. ——'s case. She was the mother of many children of both sexes, several of whom still survive. Her age 45. She was of a very large frame, and usually plentifully filled up; muscular; not very fat, just enough to give rotundity to the form. Energetic, accustomed to work, and doing her duty, as the head of a large household, and carrying on the details of a large farm. Mrs. —— was very much emaciated. She said she was sure it was a boy, she always had been so very bad with the boys, more than with the girls; she was sure that no one single thing had remained on her stomach for more than a minute or so for the last three months. Three Medical gentlemen of eminence were at the house deliberating on the case, which they all considered very dangerous, when a Medical Practitioner calling by accident was ushered into her room. After hearing the details of the case, he pooh-pooh'd the danger, and said authoritatively that he would undertake to stay the sickness in three or four days. His agents were secrets, their power known to him well, that they would do no harm, and by their use he had relieved scores; but he would not declare what his remedies were. Under these circumstances the other Medical gentlemen yielded up their case, and he became sole director of the case. I did not see Mrs. —— after this interposition, but she was interred May 21st, 1831.

Case 4.—About six months after Mrs. ——'s case (Nov. 1831), I was solicited to see Mrs. ——. I had known Mrs. —— many years. She was now 21. Had been married about seven months. Had been a middle size, plump, fresh complexion, good tempered, and altogether a very agreeable young woman. She now looked old, or rather worn, pale, thin; a face haggard with an oppressive anxiety. She said that she did not consider herself to be in the family-way. As far back as last August she had eaten an apple greedily; it was the first ripe apple she had seen. "There it is in my stomach now; it never has digested, and, despite all the sickness, I cannot get it away." The "secret remedy" had been tried without avail. On examination, the uterus was found to be very large and irritable, with every probability that a miscarriage would soon take place. It was a male fœtus.

Some months after, Mrs. —— and family removed to their own place, near Ryde, in Hampshire. I have never seen her since, but have heard from members of her family that her next child was a female, and that she has had many children since, of both sexes, without suffering any unusual inconvenience.

The last case I shall mention was the most romantic affair that has ever fallen under my supervision, very far surpassing any novel I have ever read; but with the romantic portion of the affair we have nothing to do at present. In May, 1834, I was solicited by Mr. Lake, a highly-respected Practitioner at Teignmouth, to meet Dr. Scully and himself in consultation on an embarrassing case. We found the patient, a young lady just nineteen years of age, amazingly emaciated, the bowels constipated; no fever or apparent cause for such irritation; but the sickness and retchings might almost be termed continuous, the only lull being produced by faintings. The pulse weak, scarcely perceptible, and then a full throb or two, as if the former efforts had been unable to make the blood leave the heart. Miss —— was evidently in a very precarious state. Many of your readers, advanced in life, may recall to their minds the earnestness with which Sir A. Cooper used at the bedside to enforce on his pupils the necessity of acquiring the "visus eruditus," averring that every aberration from normal health had its corresponding expression in the countenance, and that by its aid traces of aberration might be observed there, laying open the causes of the derangement, not patent to the mere superficial observer. In consultation, then, it was hinted that from the expression of the countenance, the constipation, the emaciation without fever, the almost continuous sickness and violent retchings without any cause apparent, and so continuous for such a length of time, indicated pregnancy.

On the other hand, there was her peculiar situation; her moral and most irreproachable life. To gain time for a more extended consideration, and to remove the constipation, the nurse was desired to administer an enema. She returned, saying there was an obstruction that she could not overcome. On examination, the uterus was found to be very large; impacted in the pelvis, which it completely filled; very low down; and most irritable. The examination was very brief, for it was greatly feared that from the violent urging and straining prolapsus would take place at once. However, it was ascertained that the os uteri was somewhat dilated, and that a small knuckle of membrane protruded. It is best, perhaps, to pass over the results immediate on this discovery. It was now merely a question of time, and in about forty hours the whole mass of the ovum was expelled, accompanied with much discharge. Mr. Lake fortunately was near at hand, and to his zealous care and promptitude her life was, humanly speaking, due. It is not too much to say that in the whole course of a very long and extensive practice I never saw any one so utterly bloodless recover; but recover she did, although very slowly, for it required between eight and nine weeks to pass on before she was enabled to leave her room. Some time towards the end of the September following, Miss —— quitted Teignmouth. There are reasons, however, for supposing that Miss —— married most advantageously, but was never again *enciente*. The ovum contained a male fœtus.

These cases have been selected from out of a multitude of others, because in each instance the probability of a fatal termination to the mother appeared so imminent.

Miscarriage is very frequent, and experience proves that it is much more frequently remarked in cases of male than in female gestation. In many instances miscarriages have completely altered the destination of families, and very often obliterate the line, yet in no book on Midwifery is its treatment discussed in terms at all commensurate to its importance, or rules laid down how best to control the irritability that causes abortion. Yet miscarriages are so very prevalent, and their disastrous effects often so apparent, that it would appear sufficient to direct the attention of the Profession towards it to ensure the amendment of this opprobrium on our foreknowledge and skill.

The Elms, Ipplepen, Newton Abbott.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE ROYAL LONDON OPHTHALMIC HOSPITAL.

CEREBRAL AMAUROSIS DEPENDENT ON THE ARREST OF MENSTRUATION—TREATMENT—GOOD RESULT.

(Under the care of Mr. BOWMAN and Mr. LAWSON.)

(Communicated by Mr. LAWSON.)

THE case of cerebral amaurosis I have to record is a very remarkable one, first, on account of the almost complete and rapid blindness which followed a temporary arrest of the menstrual function; and secondly, the steady and gradual restoration to sight immediately on the reappearance of the catamenia.

The almost total blindness which supervened, commencing at first with a mere impairment of vision, and so rapidly increasing that in fifteen days from the first symptoms she was so blind as to have little more than a mere perception of light with either eye, would incline to the belief that, though the primary cause might have been local cerebral congestion, still that the persistence and increased development of the symptoms must have been due to effusion causing pressure on the optic nerves in some part of their course between the optic foramen and their deep cerebral origin. This view of the case is strengthened by the fact that the whole of the retina was not equally involved. One part was more sensitive than the rest, and maintained its power of receiving and transmitting impressions even for a short period after the other portion of the retina was blind. Thus, in the left eye perception of light and of large objects in the outer part of the field remained, whilst the rest was dark, indicating that if the cause was pressure it was not uniform, and that probably those fibres of the optic nerve which traversed deeply were not compressed to the extent of the superficial ones.

In cases where the exact diagnosis of the cause must to a great extent be speculative, the effect of medicine on the disease may tend to throw some light on its real nature. Now, it has always appeared to me that the tolerance of a powerful drug in acute disease is an argument in favour of its special applicability; but if the drug is not only tolerated, but actual benefit rapidly follows its administration, credit must undoubtedly be placed to its account, even though, as in this patient, the restoration of a function which had been suddenly arrested must have contributed largely to the successful issue of the case. One of the ill effects of the cessation of the catamenia, is the production of a local congestion elsewhere at about the period when it should have normally returned.

In this girl, from some unexplained cause, the menses were arrested, and immediately she had intense pain in the head, accompanied with a feeling of sickness, and impairment of vision. So rapid was the loss of sight, that from the first feeling of uneasiness to almost complete blindness was but fifteen days. Examined with the ophthalmoscope, the retinal circulation was seen to be interrupted. The return flow of blood was impeded; but though it was clear that internal pressure caused the present symptoms, still, whether that pressure was dependent on simple distension of the vessels, or on the effusion of blood, lymph, or serum, could only be conjectural.

Mr. Bowman saw the patient, and suggested ten-grain doses of the iodide of potassium to be given three times a-day. Under this treatment, as will be seen in the history of the case, the patient is gradually recovering. True it is that the menses returned at the next monthly period, and that thus the exciting cause was removed, but still there was no sudden recovery or rapid improvement; the case from that period began to do well, and, under the regular administration of the iodide of potassium, has continued to progress. We may therefore, I think, fairly infer that if local congestion was the primary cause of the symptoms, the continuance of them to a great extent, after the return of the catamenia, was due to some effusion having taken place, and that the present improved condition of the patient's sight may in some measure be attributed to the medicinal effects of the iodide ot potassium.

F. H., aged 15, a delicate, anæmic-looking girl, but has, up to the last three weeks, always had good health. She was at that time doing the duty of parlour-maid in a gentleman's family. She had menstruated regularly for fifteen months, but suddenly, from some unexplained cause, the catamenia did not appear at their usual period, and, at the commencement of her present illness, nearly five weeks had elapsed since she was last unwell. She was seized with pains and achings in all her limbs, but she had no swelling of any of the joints.

She had excessive pain in the head, especially on the right side, and in both eyes, so as to feel incapable of moving them. She had great nausea, but did not vomit. The pain in the eyes ceased after about a week, but the pain in the head continued, and the sight of both eyes now became affected. At first everything appeared dim, as if she was looking through smoke, and in seven days from this time she was almost blind.

On April 17, just three weeks from the commencement of the attack, she applied to the Hospital, and the following was her condition:—Pale and feeble, with the staring eye and the almost fixed dilated pupil, characteristic of cerebral mischief. All pain in the head and eyes, and all feeling of sickness had passed away, but the little vision she enjoyed seven days ago has nearly left her, and she is almost blind. Her right eye is quite dark; she says she cannot even distinguish the window or a passing shadow. With the left eye she can just read letters of 20 of Jaeger's test-type in the upper and outer part of the field of vision, but downwards and inwards she is unable to make them out. The pupils of both eyes are dilated, but not to their fullest extent, and each has a very slight range of action. From the date she first noticed dimness and failing sight up to the present is fifteen days.

Examined with the Ophthalmoscope.—There is evidence of venous obstruction; the veins are large and varicose, indicating clearly that an impediment exists to the free return of blood. In other respects the eye is normal. Mr. Bowman saw the patient, and advised ten grains of the iodide of potassium to be taken daily.

April 20.—Much the same; she experiences no inconvenience whatever from the medicine. Rep. mist. No alteration whatever took place until

May 12, when the report states that the right eye has slightly improved in vision, but the left is decidedly worse. Right eye can make out letters of 18; left eye cannot count fingers. Rep. mist.

20th.—Slight improvement in the left eye. The right remains stationary. Right reads letters of 18. Left in the upper and outer part of the field can count fingers, but downwards and inwards is unable to make them out. Suffers no inconvenience from the medicine. Rep. mist.

26th.—A very decided improvement. Since she was last at the Hospital her menses have returned. Feels very much better. The pupils act much more quickly. Right reads 16 with ease; left reads 20 with difficulty, but can count fingers in all parts of the field, but with some trouble at the lower and inner half. Rep. mist.

June 2.—Continues to improve. Right reads words of 14 at six inches; left at the same distance words of 19.

9th.—Complains of slight discomfort from the medicine; watering of the nose, eyes, etc. Ordered to take the medicine only twice a-day instead of three times. The sight, however, still improves. Right eye now reads words of 6; left, 18.

22nd.—The report states that with the right eye can now read No. 2; left, words of 14. Rep. mist.

30th.—She has continued the medicine regularly twice a-day, and menstruated again since the last report. She can now with right eye read words of No. 1; left eye reads 14 easily, and tells words of 12.

July 13th.—Both eyes are progressing steadily to complete recovery. She reads with right eye, with tolerable ease, No. 1; left eye, 12 perfectly, and words of No. 10.

There is every reason to believe that in a few weeks she will be quite well. She is still taking the medicine, and she not only experiences no inconvenience from it, but has very decidedly improved in appearance and in her general bodily condition.

UNIVERSITY COLLEGE HOSPITAL.

EXTRAORDINARY CASE OF SPASMODIC COUGH IN A GIRL AGED FOURTEEN YEARS—RECOVERY UNDER THE INFLUENCE OF VALERIANATE OF ZINC AND THE COLD DOUCHE.

(Under the care of Dr. HARLEY.)

MANY of our readers may perhaps remember a very remarkable case of spasmodic sneezing which a year or two ago came under the care of Mr. Mosler, of Giessen, and of which a short abstract appeared in the journals. It occurred in a girl who was suffering from an affection of the ear, consequent upon an attack of typhoid fever. The fit lasted forty-eight hours, and reckoning the sneezes at ten per minute, the girl must have sneezed no less than 48,000 times. This case, remarkable though it be, is completely thrown into the shade by the one we are now about to relate.

In the end of January last, Rebecca D., a tolerably well-developed, dark-complexioned girl, of 14 years of age, came under the care of Dr. Harley, at University College Hospital, complaining of weakness, loss of appetite, and suppression of the menses. She had menstruated regularly two or three times, and then ceased to do so during the three months prior to her appearance at the Hospital. Tonics, both mineral and vegetable, were administered, and the girl went on improving until March 31, when the mother brought her back to the Hospital, saying that fourteen days previously she had been seized with a cough, which gradually got worse, until it had become almost incessant. In fact, according to the mother's account, the girl never ceased coughing from the time she rose in the morning till the time she went to bed at night. While standing in the waiting-room the patient coughed incessantly, and as she was a highly hysterical girl, she was kept there for nearly an hour, in order to try and tire her out. But at the end of the hour she was just as bad as when she entered the room. It was one continual round of a short bark, (she did not give herself time to fill the lungs completely in order to be able to give a proper cough,) with no perceptible interval even for respiratory purposes. The mother declared that the girl coughed to such an extent that she could not take food. On being scolded, and ordered to cease coughing, she burst into tears; but the cough went on. The patient answered questions hurriedly, and while doing so she did not cough, but with the least word the cough recommenced. After a time it was found that she could control the cough by an effort of the will, but only for a few seconds. There was no chest affection, and no apparent disease of the throat or fauces. The cough seemed to be entirely spasmodic laryngeal, and the result of hysteria. One of the students counted at intervals the frequency of the cough, and without the patient's knowledge, and it was found that she coughed at the regular rate of seventy per minute, or 4200 times per hour. And reckoning that the girl coughed during twelve hours out of the twenty-four, if the mother, an intelligent and not at all enthusiastic female, was to be believed, the girl coughed more than that—she must have coughed the enormous number of 50,400 times daily.

A mixture containing the valerianate of zinc, the tincture of assafœtida, and camphor was ordered to be taken three times a-day. And a could douche with frictions to the spine to be applied night and morning.

On April 7 the patient was again brought to Dr. Harley, and the mother with evident satisfaction stated that the cough had gradually ceased three days after the commencement of the treatment, and now the patient only coughed once or twice a-day. On questioning the mother closely, she stated positively that the girl had coughed incessantly, except when she was in bed (it ceased immediately on lying down), during eight days, and that the cough was just as frequent at home as it was while the patient was in the Hospital. So that if we even reckon 70 per minute, and for only nine hours a-day, during the eight days she would still have coughed the almost fabulous number of 302,400 times.

As the treatment related had proved so successful, it was continued for a fortnight, and then changed to quassia and iron.

The catamenia reappeared on May 19, and from that time the girl went on improving until June 2, when she was dismissed as cured.

THE ROYAL ORTHOPÆDIC HOSPITAL.

CASES OF INFANTILE PARALYSIS.

(Under the care of Mr. COOTE.)

The following cases are interesting, as illustrating the insidious nature of the attack which so frequently terminates in partial paralysis of the limbs in infants, attended with more or less contraction or deformity.

Mary Anne J., aged three years and a-half, was brought to the Hospital April 20, 1863, suffering from talipes equinus of the left foot, and general shortening of the limb, which was half an inch shorter, and three-quarters of an inch less in circumference than the opposite. The child could not walk at all; it was carried about in arms by the mother.

The mother stated that the child had had good health, and that she noticed nothing until one day, about two years ago, when on putting her on her feet to stand, she remarked that the child fell at once to the ground. On the evening of the same day a feverish attack supervened, which lasted a fortnight, at the end of which the paralysed condition of the limb was apparent.

Ordered to take tartar emetic in minute doses; friction with powerful stimulants to the back and limbs.

June 2.—Galvanism was tried without effect. Continue the liniment.

July 18.—The child can now walk about with a slight limp; the limb is firm and moderately strong, but the difference in size is prominent.

Henry W., aged two years and a-half, a healthy-looking child, was seized with a fit of screaming a year ago; nothing could pacify the child, who seemed in a passion, for nearly four hours. He appeared well afterwards, but the following morning he could not stand, and did not offer to walk for two months. Admitted at the Orthopædic Hospital June 18. Talipes equinus (rectangular) of the right foot. The right leg two-thirds of an inch shorter, and two-thirds of an inch less in circumference than the opposite.

The same treatment ordered as in the preceding case.

July 20.—The boy can walk with a slight limp; the foot has an inclination inwards, and the heel does not come readily to the ground.

For the present the operation of dividing the tendo-Achillis is deferred.

White *v.* Harston.—This was an action tried at Dorchester, on Friday, July 24. The plaintiff was a Surgeon, practising at Sherborne, where he held the office of Poor-Law Medical officer. The defendant was the vicar of Sherborne. For some time there had been misunderstanding between them; but the action arose out of a letter written by the defendant to the Board of Guardians complaining of the plaintiff's conduct in the case of a pauper named Crocker, for whose removal to Salisbury the plaintiff had refused to give an order. In the course of the trial, a revolting picture of the condition of the pauper population of Sherborne was brought to light. Amongst other things it was stated that a brother and sister, aged fifteen and fourteen, slept together, were taken ill of fever, and that after the death of the boy the girl still remained by the side of her brother's corpse until she also died. The Lord Chief Justice in summing up, laid down the law that, if the defendant acted *bonâ fide*, and from an honest belief that what he wrote was true, his communication was privileged, unless it could be shown that the defendant had been actuated by malice. The jury retired for an hour and twenty minutes, and then gave a verdict for the defendant, but at the same time they could not help expressing their regret that the defendant should have written to the Poor Law Board a letter liable to such uncharitable constructions against the plaintiff, but without costs.

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Medical Times and Gazette.

SATURDAY, AUGUST 1.

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MEDICAL SOCIETIES.

The annual meeting of the British Medical Association at Bristol, announced for the coming week, will perhaps have led our readers to turn over in their minds once more many general questions connected with this and other similar gatherings.

There can be no doubt of their practical usefulness on the whole; but the more interest attaches to the reasons of this, as, by examining what Medical Societies can effect, it will be easier to define in our thoughts what they should not attempt, and where their *prestige* may be turned to interested or objectionable ends.

In the first place, such societies represent our Profession in its corporate aspect. This is a light in which, perhaps, it hardly figures enough before the public, and a conception which may even fade from our own individual memory if not refreshed and kept alive by recurring testimony. Universities, indeed, and Schools of Medicine, aim at such a social hegemony; but the fact of their educational functions, and the relation of Medical graduates as a comparatively limited and special order to the general mass of students, is, in some at least, a hindrance to the entire identification of Alma Mater with her Hippocratic offspring. Even if this were removed, a Profession like ours, nourished by supplies of Practitioners sprung from so many sources, holding diverse diplomas, affiliated to institutions heterogeneous and often materially at variance, can hardly be said to be represented in this fashion except by the august assembly of Dii Majores, whose nectar and ambrosia flows in the cloudy mansions of the General Medical Council.

It is not only esoterically, and among the initiated, that societies draw closer the bond of fellowship, but also among the public at large. The world of patients *in posse* rarely or never meets with its advisers except singly, privately, or, at most, in the restricted group of a professional consultation. We have no courts where an admiring audience may note the acute tact with which we elicit facts from a reluctant witness, or lay bare artifices which strive by prevarication to mask the delinquencies of some vicious habit or neglected function. Nay, more, we have no Chancellorships, no silk gowns, no coifs to struggle for; and, though we may each carry, like a recruit under the Empire, the marshal's bâton of abundant fees in our pocket, yet even these are taken in a conventional stealth, and cannot well be paraded in the van of our "armamentarium medicum."

Not only our dignity, but its real source, sound knowledge, is furthered by Medical associations. There is an unquestionable difficulty in diffusing novelties, improvements, or advanced views on points pathological or therapeutic among our confraternity. Much is undoubtedly effected in this direction by the Medical Press; great discoveries give ground for treatises and monographs; even the general literary organs sometimes direct upon our concerns a fitful and intermittent light, after some fearful accident, in attacking sanitary scandals, or during the dull unpolitical season, when their columns teem with tremendous turnips, and droop laden with enormous gooseberries.

In spite, however, of all these aids to reflection, the Medical man, being both busy and full of practical cares, is not ordinarily a great reader; still less has he the energy left to turn after labouring long at an instant cause of anxiety, epidemic, local, or industrial, to complete his information on disorders which never have, and probably never will, come under his personal observation. At a Medical Society he may obtain all he needs without effort or severe mental exertion.

Many subjects, again, though of much importance, are hardly extensive and definite enough for publication in print, but gain materially by oral and conversational handling. Local infections, sanitary questions, small but ingenious details of practical treatment, points of etiquette, and the regulation of fees or other Professional remuneration, all come naturally within the province of Medical Societies. And while from the collision of wits light is evolved, the same process may tend to smooth down those roughnesses and angularities which too often make neighbouring Practitioners unwilling colleagues and uneasy companions.

Even if hostilities have actually broken out between rival potentates, and the "odium Medicum" bid fair to eclipse in vehemence its proverbial theological kinsman, the Medical Society is a ready court of appeal, informal but effective; and its expressed opinion may go far to bring about peace, or at least to fix a deserved stigma on the party most in fault.

In the metropolis we not only at times share with other centres the visits of nomadic societies, but we possess as our peculiar property many which are fixed and unmigratory. Here, accordingly, it is most easy to see at once what are the best, and also the less favourable results of such institutions. Considered generally, the London Societies are good and useful; for instance, it would be difficult to estimate too highly the practical tone, the steady, quiet research, and the willingness to acknowledge merit, displayed at the sittings of the Pathological Society, or the tacit, good-humoured irony which checks, but nowise offends, error, sciolism, or charlatanry.

Nevertheless, there is to be detected at times even in the best a liability to lapse into the crimes and misdemeanours of boredom, garrulity, and illicit advertising. At times up starts the society haunter, and pours forth to an unwilling audience his oft-told tale, his dubious facts, his loose, illogical deductions, or his egotistical records of imaginary successes. Here is a type and ideal of all a society should not be. Such a one comes to the meeting principally because it is a listless, lazy way of spending his evening; because he can hang on to the skirts of more successful men; and, not least, because he finds thus a cheap way of figuring in the published reports of the Medical journals. Worse than this, there are even some who think the mere belonging to such a body a matter of merit, and who ostentatiously tack on to their names, with an eye to fame, the mystical letters which accrue to the philosopher on the simple payment of his annual subscription.

It is not, however, the object here to show an untimely severity to institutions now in their torpid state of autumnal hybernation. To the British Medical Association we heartily wish a successful meeting, and increased means of usefulness. But if any of our readers are enamoured of associated wisdom, they may be reminded this is not the only opportunity offered them during the next few months. The Society of Societies, the very quintessence of congressional organization, the International Association for the Promotion of Social Science, is represented by a meeting of its Belgian branch at Ghent on the 14th of the approaching September.

THE OXFORD AND CAMBRIDGE MISSION TO CENTRAL AFRICA — DR. LIVINGSTONE'S VINDICATION.

THE Church of England has made the most praiseworthy efforts to establish a mission in Central Africa. A band of noble-hearted self-sacrificing missionaries, headed by Bishop Mackenzie, set forth to establish a Christian Church in all its fulness in the heart of that unhappy Continent. The English Universities of Oxford, Cambridge, Dublin, and Durham took the affair under their especial tutelage; more than £20,000 were collected for the expenses, and never did any expedition set forth more warmly seconded by the prayers of a whole community. But it has proved, hitherto, an awful failure. The bishop and his clergy have sacrificed their lives, and all in vain. It might be thought that Satan, irritated by this invasion of his most ancient stronghold, had put forth all his strength to discomfit the soldiers of the Cross. But let us see what have been the causes of failure. We have repeatedly called attention to them, more particularly in the *Medical Times and Gazette* of July 5, 1862, in an article to which Dr. Livingstone's letter in another column is a reply; further commentaries on the misfortunes of the mission will be found in our Number for September 27, 1862, and again in that for November 29, 1862, and we think it will be agreed that the causes of shipwreck are nothing new or unheard-of, but consist partly of old, well-known circumstances, and partly of conditions entirely due to the improvidence of enthusiasm. In fact, they are essentially the same as those which ended a late expedition of a similar kind to Patagonia, when a few unhappy persons were landed at Tierra del Fuego and left to starve. First, the mission was planted in a spot most difficult of access. (a) The river was no highway, but shallow, and not navigable, save by the lightest craft. Secondly, there was from this cause a want of such stores from home as well nurtured Englishmen require. Supplies could not be freighted up that shoaly river, and, when they were, they had to be carried fifty or sixty miles overland by hand. (b) Supplies of wine and necessaries, detained at the river's mouth, were appropriated by sailors. They could not be got up to the mission. Thirdly, there were the climate and malaria, to which the *most prudent* might fall victims.

(a) From a letter of Bishop Mackenzie:—"We left the confluence of the Shire and Zambesi about the 22nd of May, and had a very tedious ascent of that river. It was more shallow than Livingstone expected. He had not sounded places where the *Ma-Robert* went easily; but, then, she drew 33 inches, I think—the *Pioneer*, 4 feet 6, or 5 feet. We were on sandbanks for a week at a time; but at last, when Livingstone's patience was almost exhausted, we got to the anchorage where his vessel lay last time he was in the Shire."—From "Report of the Oxford, Cambridge, Dublin, and Durham Mission for 1861." Office: 5, Mitre-court, Temple, London, E.C.

(b) "We have to-day received the last instalment of our baggage from the ship. It was all landed in July and put under cover of a large tent; we have made four trips altogether—the first time with about thirty bearers, each of the following times with about eighty. It is a great comfort that we have no difficulty in finding men to carry. We were afraid at first that it might not be easy; now we have always more offering than we want. This time we sent down one of our Cape Town men—he left us on Monday morning, and returned this morning (Monday) again, having done the whole business himself in excellent style. It is about fifty miles each way. Each man carries from 30 lbs. to 40 lbs. weight, and gets a piece of white calico, four yards long, worth about three pence a yard in England—that is not much. I calculate that we shall spend about £60 a year in carriage over these fifty miles. But all these are merely the accessories to our work. . . . Our chief wants must be for some time flour, biscuit, preserved meats—(we can get no change from goat, goat, goat)—sugar, tea, coffee, wine, a little brandy, suet—not an ounce does a 'hircus' yield, and there is no game near us—a great luxury. The craving for fat sometimes, though perhaps nasty to European ears, is a great fact here. . . We were sadly pestered with fever all this time, on the journey to the mission, as were we also in the Shire, but in no case did it assume a dangerous feature. The Doctor's (Livingstone) prescription was at all times resorted to, and I think with uniform results. I may as well state that quinine was always the follower up of the dose. A short experience of fever cases in the hills tends to show that a full dose of quinine may stay the attack at once, say 10 grains when the shivering fit begins—but this would not do in the river. The prescription there was 4 grs. of calomel, 4 grs. of resin of jalap, 3 grs. of rhubarb, 3 grs. quinine, in pills, to be repeated in twelve hours or so, should they not act as a purgative. During the action of the medicine, quinine in 4 gr. doses. . . We have also given a goat among the people every Sunday. Their ordinary food is entirely vegetable—Indian corn, beans, etc.; the goat is the ὄψον for Sunday. It is but a mouthful for each, as you will guess; but it makes a difference. I gave them also a goat on the first Tuesday in October—our anniversary day here and at home. The desire for animal food induces the people here to eat rats and mice. There is no four-footed game larger than a kind of rabbit, which is very scarce; I have seen only one."

So far, then, as these three particulars are concerned, we held and affirmed that the mission was ill-placed; that it was positively homicidal to send delicate Englishmen and women to a place where they could not be reached, from which they could not retreat, and where they could not be fed, and could only escape fever by drugs; and we intimated plainly that Dr. Livingstone was considered—as he was by a considerable section of the English people—responsible in some measure for these disasters, inasmuch as he had been the first originator of the mission and had selected its site.

How far that heroic man's letter is an entire vindication, we leave it for others to say. At all events he is not responsible for the neglect of the founders of the mission, who ought to have caused a further and fuller survey to be made of the ground before they fixed on its site. But there are two points further to which we would direct attention. The great cause of embarrassment has been the slave trade. But this surely ought to have been foreseen. A Christian mission cannot have a chance amongst such hordes of savages, unless backed by a military power to enforce obedience and order. We would beg our readers to refer to the "Report," from which we have given quotations, where they will see that one of poor Bishop Mackenzie's first deeds was to be entangled in a native war. He was of course much blamed by people in snug parsonages at home; but the thing was inevitable. If some chief would subdue these hordes there might be a chance of civilisation,—none at present.

We must not dwell, however, on this point, but hasten to show that which is the moral of Dr. Livingstone's letter. He evidently refers the failure of the mission and the sacrifice of the missionaries neither to the position, nor climate, nor want of food so much as to utter ignorance of, and reckless disobedience to, what some sneer at as *sanitary law*,—as if it were the mere caprice of philosophers, or trumpery municipal legislators, — but which we may with all propriety call the conditions which the Lord God Omnipotent has imposed upon creation; laws which, as the holy Psalmist says, "shall never be broken." In this sense the sacrifice of poor Bishop Mackenzie will not be without its fruits. The English clergy are struggling to retain a "dead-letter" interpretation of the Old Testament. The whole tendency of this teaching, so far as health and sickness are concerned, is, not that the conditions and laws which the Creator has imposed on the material universe must be reverently studied and yielded to, but that sickness is a supernatural visitation, and to be removed only by supernatural aid. The leper won't wash, but he looks for a great miracle. The Italians besiege the saints with prayers, and leave all their filth in the streets. We thank Dr. Livingstone for laying bare to us a part at least of the causes of the Central African disaster, and showing that they at least were not inevitable. As for his *tu quoque*, we accept it complacently. We will do our best to get rid of London cesspools, and to get London air and London water into a purer state. Meanwhile, thanks to the heroic Doctor, the value of the Medical element in missions, to which we have often alluded, stands out more clearly than ever. In a private letter, Dr. Livingstone says that "the reason why, under Providence, we escaped during the first three years without a single death, was the preponderance of the Medical Profession in our expedition." "Now," he says, "we have Dr. Kish, the botanist, Dr. Meller, the naturalist, and myself; so no detached service is performed without a Medical attendant." We hope earnestly that the supporters of the Oxford and Cambridge mission will take their misfortunes in good part, and that without repining and abandoning their scheme, they will set to work like men to repair past mistakes, choose a more favourable site, with a better basis of occupation, and with all reasonable human means for preserving the precious lives of those who are, alas! too willing to sacrifice them for the propagation of our holy religion.

ARMY MEDICAL SERVICE.

Upon the 10th instant, the competitive examination for admission into Her Majesty's Army Medical Department will be held. We have been told by Dr. Gibson, in an advertisement, that candidates must apply at once, but we have not been informed what is the number of vacancies. The manner in which this invitation will be answered has, doubtless, excited as much curiosity in the minds of the Medical men of the Army as it has done in that of our own.

There never was a period when a large number of well-educated men was more needed than at present. However satisfactory Sir Charles Wood's Indian Budget may be, the Report of the late Sanitary Commission tells a very different and an alarming story. As Colonel Sykes said in the House of Commons, the facts are indeed formidable. Every 100 men sent to India require eleven recruits annually to keep up the number. An army of Europeans in India, numbering 85,856 men, has required 10,000 recruits annually, and one-half the recruits died in five years. The mortality has been 60 per 1000 among our troops; and a company out of every regiment has been sacrificed in twenty months. We are upon the eve of great changes and reforms in matters military-Medical, and it is of the greatest importance that the inauguration and superintendence of the sanitary measures should be efficiently set about and carried on.

For the examiners of Medical candidates for Indian service to be faithful to their trust, and honest in the exercise of their duties, the examination must reach a certain standard, however little *that* may be entitled to be called "competitive" where the number of vacancies exceeds the number of candidates. The better the quality of these the more economical will they prove to the country; and we may assume that the Government is desirous of securing the services of a really good class of men. No more important duties can be required of men than the members of the Medical Department of our Indian Army will have to perform. Not only has a Medical officer to treat disease the most active in its progress, but he has to strive to preserve the health of those under his care in a climate confessedly inimical to the European constitution. To advise and report upon the site and construction of barracks, the nature and quantity of food, clothing, and exercise, are, in the highest degree, responsible duties. A man must be something more than a mere Medical man, he must be a gentleman of liberal education and scientific attainments, if his opinions are to have weight with commanding officers.

What are the inducements held out to such men as these?

The gloom which had settled upon the faces of Army Surgeons for so many years was rapidly being dissipated after the publication of the Warrant of 1858, and, for a short time, the candidates were both numerous and of superior quality. Whether it was that a too honourable and independent spirit had been thus engendered among the lower branches of the Medical Department, which it was necessary to curb at once, we cannot say, but the popularity of the service was of short continuance.

If the number of candidates at the approaching examination be no greater than at the last, the work of the examiners will be easily got through! The spirit of antagonism to the Medical service which animates the Horse Guards' authorities is a very strong one. Medical reports are quietly pigeon-holed and ignored, and the Department obtains discredit where it merited praise. Some sanitary commission or other drags huge evils into light, and the public naturally enough wonders what the Medical men have been doing, quite forgetting that these things are no new matters, but have been reported upon again and again, only to accumulate papers in the dark corners of official places.

The evils attending the working of the Medical Department in America ought to have some influence with us. We there see what accrues from pressing men of all kinds and denominations into the Medical service during a time of need. In the present unsettled state of European affairs, and with the prospects of a war with Japan or in New Zealand, no one can tell how soon that need may come upon us.

We are not going to discuss again the causes of discontent prevailing in the Medical Department of the Army, the enmity towards it invariably shown by the authorities, or the alleged want of such support by the head of the Department itself, as to secure the confidence of his subordinates—these have been stated and reiterated *ad nauseam*. We will, however, endeavour to trace the career of a successful candidate for the post of Assistant-Surgeon, for the sake of those who may be just emancipated from the lecture-room.

Having passed, then, a good examination, he proceeds to Netley, where he goes through an excellent, but very laborious, course of study, at the termination of which he is again examined, and, if found competent, gazetted a Staff Assistant-Surgeon.

Now, it is tolerably well known that this is not one of the most desirable positions in the Army. An Assistant-Surgeon upon the staff must fill up any gap; the scene as well as the nature of his duties may undergo many changes within a short period. We know of Assistant-Surgeons who have been "*Professionally*" engaged in watching a butt at rifle practice for more than a year, never having seen a patient, or exercised one single Professional acquirement during that time. It is also the fact that these men—in common with every other Medical officer—can obtain no relief or relaxation from these miserably monotonous duties, although they witness their combatant brethren constantly enjoying that privilege. In passing, we might venture to say that a return of the injuries which these Medical officers have been called upon to treat would form an interesting document, and one not very troublesome to prepare.

To continue:—In due course the Assistant-Surgeon finds himself gazetted to a regiment, and he goes abroad and performs duties which entail so much clerk work that civil Surgeons cannot be found to take Medical charge of troops at the stipend allowed. Should he live through the epidemics and diseases incidental to foreign climates, he is called upon, after five years' service, to pass another examination before he is eligible for promotion. That event will arrive, at the present rate of promotion, and with the present retirement after twenty-five years' service, when he is wearied with "hopes deferred," and thoroughly tired of the service and his monotonous duties.

It is no wonder, then, that young men of good Professional attainments will balance these advantages against those in civil life. Nay, it is not surprising that Medical officers will throw up years of service in the army to recommence a Professional career under what they deem happier auspices than Her Majesty's service now presents.

But, it may be asked, how comes it that, with all that has been done of late years to improve the position of the Medical officer, there are a fewer number of candidates than formerly, when the rank, pay, and position of an army Medical man was confessedly inferior and bad? No doubt the increased difficulties and expense attending a Medical education have had some effect here; but these in themselves are inadequate to explain the present unpopularity of the Department, and the reluctance which men show to enter it. Our own inquiries would lead us to believe that the internal working of the Department has been a cause of great dissatisfaction. Medical men are called upon to perform many duties that they dislike, deem derogatory, or such as are distasteful to the better class of Professional men. Then, again, the present system of promotion of Assistant-Surgeons—viz., exclusively by the rule of seniority—has a depressing effect. It has been our lot to know many Medical officers, and, among them, men of great attainments and zeal. What course have these pursued? Commencing with conscientious views, and animated by a sincere liking for their Profession, they have, for a time, worked with a will; but to one and all, sooner or later, the time comes when they halt and ask themselves "Cui bono?" and perhaps "stand at ease" for the remainder of their official lives, with their eyes fixed upon the completion of their twenty-five years' service.

The present state of things is very lamentable; but, so long as we have troops, we must provide them with Medical officers, and if the present strength is to be recruited from the best class of students at our Medical Universities, some additional inducements must be held out before the Government can expect to obtain their services.

We have not scrupled to speak out upon the state of the Department, because we have felt it to be our duty. We yield to no one in our desire to see the public services supplied with really able men—educated, honest gentlemen—who will be above petty cavillings about uniform and rank, but resolute in demanding the treatment accorded to members of an educated Profession.

THE WEEK.

SPREADING CONTAGIOUS DISEASE.—LEGAL LIABILITY.

It is highly important that the Medical Profession should be aware of a decision lately given in the Malton County Court. If it be once established that the carriers and spreaders of contagious disease are legally responsible for the results, it will put a check on the reekless manner in which children, passing through the desquamative stage of scarlatina, are constantly sent to farm-houses and sea-side lodging-houses. The following *résumé* of the case is given in the *Leeds Mercury* of July 27, 1863:—

"Mr. W. Thompson, farmer and lodging-house keeper, at Hovingham, a rising watering-place near Malton, sued Mr. John Postill, draper, of Burlington, for £60, for loss sustained by plaintiff by defendant's family bringing the scarlet fever into his house. Defendant it seems had taken the house and removed his family there soon after they had had the fever, in consequence of which plaintiff's niece and wife both took the disease. No one could be got to wait upon the invalids, and plaintiff therefore had to stay at home and neglect his business, and there was a considerable expense incurred in cleansing, papering, and painting the house. The case was supported by the evidence of Dr. Lascelles, of Slingsby, who stated the scarlet fever to be strictly a contagious disease, and that considering the fact that defendant removed his family to Hovingham only a fortnight after a Medical gentleman had ceased attending them, he had no hesitation in saying the plaintiff's wife and niece had taken the infectious disease from the defendant's children. His Honor reserved judgment till the present court, when he found a verdict for the plaintiff, damages £10, with all costs. The case, from its novelty, and the liability for frequent occurrence of similar circumstances, has caused much interest."

The moral is, that scarlatina patients should not be sent from home until desquamation is completed, and that when convalescents from contagious disease seek change of air, the lodging-house keepers should be honestly informed in the first instance of the risk to which they are to be exposed.

VACCINATION (SCOTLAND) BILL.

The Royal College of Physicians of Edinburgh held an extraordinary meeting on July 16, 1863, at which the following, amongst other resolutions, were agreed to:—

2. "That the College observe with satisfaction that the title of public vaccinator is to be abolished, and that the duties of that official under the bill are to be restricted to the vaccination of paupers and recusants, and, in the latter case, only when directed by written order of the Parochial Board; that the establishment of vaccination stations is not to be compulsory; that the *onus* of sending the certificate of vaccination is to be laid on parents and guardians, and not on the Medical Practitioner; that instead of proceeding against defaulters at once by fine or imprisonment, they are to be offered vaccination in the first instance; that the objectionable distinction

between the certificates of the public vaccinators and registered Practitioners, contained in clause 28 of the original bill, is to be abolished; and that the interpretation clause is to be so altered as not to interfere with the Medical Act.

3. "That the College regret that the very inadequate remuneration given by the bill to the vaccinators for performing the operation, and ascertaining and certifying as to its effects, is not to be increased. At the same time they mark with satisfaction that their duty is now all but limited to the vaccination of paupers; and that as the appointments will, in all probability, be in most cases conferred on the parochial Surgeons, the fee, small as it is, will be an addition to their salary, and is equal to the fee allowed in England, and higher than that in Ireland, for the same duty, and that it is, after all, only a minimum, which any Parochial Board, appreciating the value of duly paid labour, can increase.

4. "That the College regret that the indirect compulsory clauses have not been restored to the bill; they feel satisfied that, ere long, new legislation will be required, when they trust the Legislature will form a more just estimate of the value of indirect compulsion as a means of securing the more general diffusion of the blessings of vaccination.

5. "That the College regret that the bill contains no provisions by which the migratory unvaccinated population immediately above pauperism, including those who labour in the making of railways, canals, and other public works, can be vaccinated; and desire to express their conviction that, while this is neglected, anything like general vaccination, as a check to small-pox, is unattainable.

6. "That the College are of opinion that a movement should immediately be made to obtain, through the Privy Council or otherwise, the means of securing an adequate supply of vaccine lymph for Practitioners in the three divisions of the United Kingdom; failing which, all legislation must of necessity prove inoperative."

We are glad to see that the College recognises what we have often pointed out, viz., the necessity of looking after the "migratory,"—in other words, the tramping, hawking, peddling, costermongering, gipsy, and vagrant part of the population at large. It is amongst this class, we believe, that small-pox is engendered and fostered, and, from these, communicated to those above them.

Resolutions 2 and 6 are unworthy of the College, and show a want of grasp of the subject, and a truckling to mean local jealousies. All experience shows that vaccination, to be effective, must be in few hands. The vaccinator must have, week after week, at least one *healthy* child from which to take the lymph, and propagate it directly from arm to arm. He can then store up enough on *points* (or *tubes*, though these are doubtful) to carry on the succession in case of accidental failure, and can supply, at a *fixed payment*, a healthy arm or lymph to neighbouring Practitioners. Depend on it, that wherever Practitioners depend for "an adequate supply of vaccine lymph" on a central Board, instead of on their own industry and foresight, then in that district will the vaccination be slovenly and inefficient. "All legislation," we are happy to say, "*must* prove inoperative" in the absence of public spirit and intelligence. Why should the Privy Council supply Practitioners with what Practitioners can best get for themselves? We really feel no pride in these resolutions of the Royal College of Physicians of Edinburgh.

PARLIAMENTARY.

On Thursday, July 23, the attention of Government was called in both Houses to the disgraceful spectacles which have within the last few weeks ended in fatal accidents at Cremorne and Aston Park, Birmingham. It appears from Earl Granville's statement in the House of Lords, that, as the law stands, all the Government can do to discourage tight-rope exhibitions is to warn the persons employing or permitting them of their legal responsibility in case of accident. Both he and Lord Shaftesbury thought that public opinion was the best corrective of such practices. We doubt, however, whether the mob who continued dancing and carousing after the death of the wretched mother and child at Aston Park are the class to be readily influenced by newspaper articles or speeches in the House of Lords. Boxing and cock-fighting are illegal sports; why should not rope-dancing be made so also?

The Indian Budget of Sir Charles Wood, announcing a surplus on the year 1862-63 of £1,280,000, induces us to hope that measures of sanitary reform may really be undertaken in that country on a scale in some degree commensurate with the necessity. A considerable sum is to be spent on new barracks. In referring, however, to this subject, Sir Charles Wood offered some important criticisms on the figures and deductions of the late Commission.

"In consequence of the report of the Commission appointed to inquire into the sanitary condition of the Indian army, a question was put the other night for the purpose of ascertaining whether we were prepared to take any steps in reference to the mortality in the Indian army. I am sorry that that question was put, because I think that a careful examination of the documents contained in the Report would have shown that the general conclusion as to the mortality, though perfectly correct, was based on facts going so far back that they do not afford a very good index of the sanitary state of the Indian army at the present moment. There is not the least doubt that the habits of the soldiers were more intemperate in former years than now, and the rate of mortality which prevailed some forty years ago is no good criterion of the rate of mortality at present. If we look to the appendix of the Report, we find that the conclusion arrived at is founded on accounts embracing four or five years of extraordinary mortality, which serve to swell up the average. For instance, in the Burmese war during 1824 and the two following years the mortality was 129 per 1000, 157 per 1000, and 158 per 1000. In the war of the Cabul massacre the mortality was 107, and in the first year of the Sikh war 124 per 1000. These few years swell the average in a wonderful way. Those were periods of war, but if we take periods of peace, the decrease of mortality is remarkable as we approach the present time. Before the Burmese war the mortality was 75 per 1000; and in the next periods of peace after, the mortality was respectively 53 per 1000, 50 per 1000, 42 per 1000, and 32¼ per 1000. During the mutiny in India, the mortality in 20 regiments which were sent from this country, but which were not in action, was only 34 per 1000; and in 8 regiments, which were in India at the time, the mortality was only 30 per 1000. But coming to the last year for which we have complete returns, the year 1861, I find that in that year in Bengal the mortality was 47 per 1000, of which nearly one-half was owing to an outbreak of cholera; in Madras the mortality was only 12·8 per 1000, and in Bombay only 20 per 1000. That is by no means a higher mortality than prevails in more temperate climates. Referring to the rate of mortality in the West Indies, I find it stated at 60 per 1000; in Ceylon at 38 per 1000, in the Bermudas at 35 per 1000, and in the Mauritius at 24 per 1000. The rate of mortality, therefore, as stated in the Report of the Commission on the Sanitary State of the Indian Army, is not a fair representation of the ordinary mortality, sufficient allowance not being made for the casualties of the service, and for the deaths of persons suffering from wounds and diseases contracted in service. The ordinary mortality in India in times of peace is nothing like that which has been stated in the Report, and I think it right to make this statement, because some alarm might otherwise exist in the public mind. It is not, however, to be supposed that we will relax in the least in our sanitary precautions, for it is incumbent on us to take every means for the preservation of the lives of our troops in India."

It is to be hoped that the flourishing condition of Indian finance may induce the Government to consider the claims of the Army Medical officers in India, and to extend the Warrant to the service in that country. The injustice of reducing an Assistant-Surgeon, who in England has the pay and rank of a captain, to the rank and pay of a lieutenant on his arrival in India, is glaring enough, but it is far more inexcusable when an enormous surplus removes any necessity for parsimony, and when the whole country is to undergo a measure of reform, which has been framed on the suggestion of the Medical officers, and the success of which must depend in a greater degree on their information, science, and energy, than on the exertions of any other branch of the public service. The introduction of the chinchona plants into India was one of the points chosen by the Secretary for India as matters of congratulation.

On Friday, July 24, the Pauper Lunatics' Asylum Bill was read a third time and passed.

Lord Shaftesbury called attention to the first report of the Children's Employment Commission. The employments on which Lord Shaftesbury commented as injurious to the physical and mental well-being of the children were the manufacture of pottery, lucifer-match making, percussion-cap making, paper-staining, fustian-cutting, machine lace finishing, pillow-lace making, and chimney-sweeping. In the potteries, children aged from 6 to 18 are worked from half-past six in the morning until half-past six in the evening, and sometimes till eight or nine. The ovens in which they work are heated from 126° to 148° Fahr. They are twelve feet square and from eight to twelve feet high. The effect, of course, is a deterioration of the race.

> "The potters are, as a rule, stunted, ill-shaped, and frequently ill-formed in the chest. They become prematurely old, are short-lived, are especially prone to chest disease, pneumonia, phthisis, and asthma. Scrofula is a disease of two-thirds or more." "Each generation," says Dr. Greenhow, "becomes more dwarfed and less robust, and but for their occasional intermarriage with strangers this deterioration would proceed more rapidly."

There are 1800 children and young persons under 18 employed in lucifer match making. They frequently work late into the night in ill-ventilated rooms, and the Commissioners report that

> "The mental state of the children and young persons calls for an effort to remove a dark blot from this portion of society. It would be difficult to find an average state of intelligence so low as that exhibited by the answers to the questions addressed to these children. A very small proportion can be said to have been taught."

In relation to the physical effects of the occupation in which they are employed, the report says they suffer from—

> "The usual and various results of intense labour and bad air, but the peculiar disease is the phosphorous disease, or 'necrosis of the jaw.'"

The manufacture of percussion-caps is principally carried on by young girls, who are constantly being injured by explosions. The other trades mentioned, with the exception of chimney-sweeping, are chiefly made injurious by overwork and defective ventilation. In reference to chimney-sweeping, Lord Shaftesbury stated that there are still 2000 climbing boys employed in this country. The evidence collected by the commission as to the cruelties to which the boys are subjected, and the mode in which they are leased out and bought and sold by their parents, is unsurpassed by any picture of American slavery. Lord Shaftesbury quoted some portion of the evidence of Mr. Ruff, a master sweep, of Nottingham, from which we take an extract.

> "No one knows the cruelty which a boy has to undergo in learning. The flesh must be hardened. This is done by rubbing it, chiefly on the elbows and knees, with the strongest brine, close by a hot fire. You must stand over them with a cane, or coax them by the promise of a halfpenny, etc., if they will stand a few more rubs. At first they will come back from their work with their arms and knees streaming with blood; then they must be rubbed with brine again."

His lordship concluded by saying that it was his intention at the commencement of next session to introduce a measure for the removal of these abominations. The first report of the commissioners included only six trades, and applied to 27,000 children. Other reports will bring up the number to 100,000. The claim of such a number rests not only on humanity, but on political considerations, as involving the well-being of so many future citizens.

In the House of Commons, Mr. D. Griffith called attention to the outbreak of disease among sheep in the West of England during the summer and autumn of last year. He stated that the remedy recommended by Professor Simmonds—inoculation—proved a failure, and narrated how the malady spread until it was arrested by Professor Gamgee, of Edinburgh, who substituted separation for inoculation. The hon. member concluded by asking the question of which he had given notice, viz., whether the Government intended to take any steps for the prevention of the practice of the inoculation of sheep with the virus of sheep small-pox, or "variola ovina," for the presumed object of mitigating the disease, on the principle of the actual prohibition in force against such practice in the case of the human subject; and what had been the results of the Government experiments of trying the effects of vaccination as a preventive of the sheep small-pox on a certain number of sheep obtained by the Government for that purpose.

Mr. Lowe regretted to say that the experiments which had been tried as to the vaccination of sheep by Mr. Marsden and Professor Simmonds during the last six months had turned out unsatisfactorily. Had they proved satisfactory they would have been terminated before now; but before a negative decision was pronounced many attempts had of course to be made. He therefore could give no decisive answer as to these experiments, except that they afforded little hope of extending to sheep or any other animal the same remedy as was found efficacious in the case of the human subject. As to inoculation, the experience of the late epidemic in Wiltshire was much against it, because in those flocks where inoculation was used 20 per cent. of the sheep died, whereas in those where it was not used only 1·6 died. It was a question, however, whether it would be right absolutely to prohibit a man from inoculating sheep which were his own property, provided he took the precaution of separating them from other sheep, in order to prevent the spread of the disease. But that question must be considered in connexion with the general question of the diseases of cattle, which would have to be examined during the recess. He might, however, observe that there was reason to believe that farmers could not do a more imprudent thing than to inoculate their sheep.

Mr. Cox drew attention to the frequency of infanticide. He suggested that the bastardy laws were to be blamed for the deaths of a large number of children who had attained the age of twelve months and upwards, the allowance of 2s. 6d. a week for the maintenance of a child being wholly insufficient. He was corroborated by Dr. Lankester, one of the Coroners for Middlesex, in the assertion that juries were averse to find verdicts of wilful murder against mothers, because the punishment for murdering a child was the same as for murdering an adult. During the recess he trusted that the Secretary of State for the Home Department would take this subject into consideration, and see whether he could not devise some remedy.

On Tuesday Parliament was prorogued by Royal Commission until October 14.

FROM ABROAD—M. MOQUIN-TANDON'S REPORT OF VIVISECTIONS—CERTIFICATE OF A DOCTORESS—REPORT ON SYPHILISATION—OPHTHALMIA IN THE BELGIAN ARMY—PRIZE QUESTION OF THE LEOPOLDINO ACADEMY—ELECTION AT THE ACADEMY OF MEDICINE.

It will be recollected that some time since a deputation from the English Society for the Prevention of Cruelty to Animals made a representation upon the subject of the vivisections performed at Alfort and other French schools. And certainly, although this prejudiced and fanatical body (judging from the proceedings at their recent conference) can scarcely be regarded as a prudent councillor, there can be no doubt that the atrocious cruelty of some of the experiments, and the needless repetition of others, have been well calculated to excite disgust in even the most forbearing of minds. The French Emperor took this view, and, while ordering a temporary suspension of those at Alfort, he called upon the Academy of Medicine to state the limits within which the practice of vivisection may be properly permitted, in order, we suppose, that the necessary decrees, which in France seem to be required for the regulation of even moral duties, might be issued. The Academy appointed a committee, of which the lamented Moquin-Tandon was reporter, and at the period of his death he had a report ready, by which it is said that the difficult problem of distinguishing between the use and the abuse of vivisection was admirably solved. It is now announced that this report has been withdrawn from the Academy by the family of the deceased, because it had undergone modifications and alterations, they being determined that it should only be presented as the author left it. This is, indeed, a strange conclusion, as any one would think that so important a document as an academical report would be in some measure the joint production of the committee, and not amenable to repression.

One of the trade societies of Lyons has recently admitted one of its members to claim relief from its funds on the presentation of a certificate from a celebrated female bone-setter. "The undersigned certifies that M—— is suffering from a luxation of the great Asiatic nerve."

On the invitation of Professor Boeck, Drs. Steffens, Egebert, and Voss formed themselves into a committee for the purpose of examining into the experiments made of treating syphilis by syphilisation. They have fulfilled this mission from the year 1856 to the present time, and have just presented their report to the Christiana Medical Society. The conclusion they have arrived at is as follows:—

"We regard syphilisation as a superior curative procedure to that of derivation, and, although we cannot affirm that syphilis may be always completely cured by this method, we unanimously declare that we are aware of no mode of treatment which can produce more, or as much, effect as syphilisation in cases of secondary syphilis occurring in persons who have not already been treated by mercury."

M. Vleminckx, Honorary Medical Inspector of the Belgian Army, recently laid before the Brussels Academy of Medicine a statement exhibiting the great progress which has been made in diminishing a scourge which has so long afflicted the army—the Egyptian, or military ophthalmia. Improved sanitary measures and treatment have worked wonders, so that the pensions accorded for affections of the eyes have diminished from 952 granted in 1830-40, to 208 granted in 1850-60. The diminution of pensions for this malady has indeed been so progressive, that M. Vleminckx predicts their entire cessation by the end of the century. Granular or military ophthalmia has indeed well nigh disappeared from the Belgian army, as in 1861 there were only two cases per regiment.

The Royal College of Surgeons does not seem singular in not having essays sent in to compete for its prizes, as we find that celebrated body the Leopoldino Academy of Naturalists in the same predicament. For the last question for the Cothenius prize, which is at their disposal, "The Anatomy and Physiology of the Eye in Birds," no essays have been sent in; and the committee now proposes another question, the essays competing for which, written in the German or Latin language, must be sent to Dr. Carus, President of the Leopoldino-Carolinean Academy, Dresden, before April 1, 1865. The prize amounts to 300 thalers, to which 150 have been added, and the successful essay will be published in the *Verhandlungen* of the Academy. The statement of the new question is made at too great length to admit of transcription, but may be found in No. 3 of the *Leopoldina* for 1863. It is there observed that although the Structure of the Spinal Cord has been made the subject of great and important works, much obscurity still prevails with regard to its primitive fibres and their relations to the brain and nerves. It is suggested that the formation and direction of these primary fibres will be best exhibited by following out the development in an animal of one of the four superior classes of animals as completely as possible. Newly executed works which have already been printed are allowed to compete.

M. Magne, Director of the Imperial Veterinary School at Alfort, has been elected into the Section of Veterinary Medicine of the Academy of Medicine.

Surrey County Hospital, Guildford.—The ceremony of laying the foundation stone by the High Sheriff took place yesterday (Friday).

THE DEGREE OF MASTER IN SURGERY OF THE UNIVERSITY OF LONDON.

The Senate of the University of London, in accordance with the power conferred by the last charter of the University, have issued the following Regulations for the degree of Master in Surgery. It has been determined that the Examination in Practical Surgery, specified in the Regulations for the second M.B. Examination, together with the Examination for Honours in Surgery, shall be omitted from the ensuing and every subsequent M.B. Examination, and shall be henceforth transferred to the Examination for the degree of Master in Surgery, the first examination for which will be held in March, 1864.

"*Master in Surgery* (*Pass Examination*).

"The Examination for the Degree of Master in Surgery shall take place once in each year, and shall commence on the first Monday in March.

"No Candidate shall be admissible to this Examination unless he have produced Certificates to the following effect:—

"1. Of having taken the Degree of Bachelor of Medicine in this University.

"2. Of having attended a Course of Instruction in Operative Surgery, and of having operated on the dead subject.

"3. Of having, subsequently to having passed the First M.B. Examination, attended to Practical Surgery, with special charge of Patients, in a Hospital, Infirmary, Dispensary, or Parochial Union, during Six Months.

"These Certificates shall be transmitted to the Registrar at least fourteen days before the Examination begins.

"The Fee for this Examination shall be Five Pounds. No Candidate shall be admitted to the Examination unless he have previously paid this fee to the Registrar. If a Candidate fail to pass the Examination, the Fee shall not be returned to him, but he shall be admitted to any subsequent M.S. Examination without the payment of any additional fee, provided that he give notice to the Registrar at least fourteen days before the commencement of the Examination.

"The Examinations shall be conducted in the following order:—

"Monday—Afternoon, 3 to 6. Surgical Anatomy, by printed papers.

"Tuesday, commencing at 10 a.m. Performance of Surgical Operations upon the Dead Subject; Application of Surgical Apparatus.

"Wednesday. Examination, and Report on Cases, of Surgical Patients.

"Monday in the following week, commencing at 1 p.m. *Vivâ Voce* Interrogation.

"On Wednesday morning at nine o'clock in the week following the commencement of the Examination, the Examiners shall publish in alphabetical order the names of such of the Candidates who have passed. And a Certificate under the Seal of the University, and signed by the Chancellor, shall be delivered to each Candidate.

"*Examination for Honours.*

"Any Candidate who has passed the M.S. Examination may be examined for Honours in Surgery.

"The Examination shall take place on Wednesday and Thursday in the week following the commencement of the Pass Examination, and shall be conducted by means of Printed Papers in the following order:—

"Wednesday—Afternoon, 3 to 6. A Commentary on a written Case in Surgery.

"Thursday—Morning, 10 to 1; Afternoon, 3 to 6. Surgery.

"In the course of the following week the Examiners shall publish a list of the Candidates who acquit themselves to their satisfaction; the Candidates being arranged in three Classes, according to their respective degrees of proficiency. Candidates shall be bracketed together if the Examiners are of opinion that there is no clear difference between them.

"If in the opinion of the Examiners sufficient merit be evinced, the Candidate who shall distinguish himself the most in Surgery shall receive Fifty Pounds per annum for the next Two Years, with the style of University Scholar in Surgery.

"Under the same circumstances, the First and Second Candidates shall each receive a Gold Medal of the value of Five Pounds."

REVIEWS.

Infant Feeding, and its Influence on Life; or, the Causes and Prevention of Infant Mortality. By C. H. F. ROUTH, M.D., M.R.C.P.E., etc. 1863. London: J. Churchill and Sons.

ALTHOUGH this book belies itself by leading off with a quotation from the great Tupper, it is in the main earnest, new, and well-written. "A child," beyond all doubt, "in a house," or on an unsuspecting friend's knee, "is a wellspring," not only "of pleasure," but of other fluids which give unconscious force to the worn metaphor. The author's contrast between its merry health and helpless sickness bears out his claims of love for these little ones, which is at the root of their successful Medical treatment. He begins by statements of infant mortality, shows how large it is, and asks whether it is a necessary evil. After just complaints at the want of reliable English statistics, he proceeds to deal with French returns, showing the causes of deficient viability, with the great influence of diseases produced by injudicious food and defective hygiene. "Want of breast milk" he thinks to be exaggerated as a cause, though really powerful; attributing many of its reputed results to hand-feeding defectively carried out. Town and country, Hospitals and homes, seasons, light, and exposure, next occupy his attention, followed by general principles regarding infant food, drawn from physiology and comparative anatomy.

Wet-nursing commences a second part, leading to the question of a healthy woman's duty to suckle her own children. His strongly affirmative answer is confirmed by the many disorders to which a neglectful mother exposes herself;—"moral punishments," as he thinks, for evaded duties. Galactorrhœa, in its Medical aspect, is next considered; for its treatment he recommends limited ingestion of fluid, purgatives, and astringents, with use of "four remedies known to have an anti-galactic effect—iodide of potassium, belladonna, colchicum, and iron." Of the efficacy of the second he speaks highly, and we believe truly.

Defective lactation gives origin to curious evidence respecting the influence of mental causes on this secretion. Its treatment is somewhat quaintly divided into methods—"That, 1, are applied locally to the breast; and 2, which are applied to the sympathising genitalia."

Under heading No. 1 come facts as to sucking, and its power of producing a flow of milk in virgins, old women, and even men; also several interesting cases where lactation was restored, after suspension, by currents of electricity.

No. 2, starting with the known sympathy between the breasts and genital organs, indulges in singular speculations as to what is termed "the proper functional use" of the latter. But that a wet-nurse, if married, should occasionally be allowed to see her husband is a recommendation which, even if it excite a smile, has the unquestionable sanction of morality.

Dietetic treatment of this malady points to fish, crustaceans, and especially conger-eel soup. A recipe given for the latter luxury sounds appetising in the highest degree. Revalenta, lentil powder, turnips, potatoes, and edible fungi receive notice among solids; double stout, goat's milk, and sweet wine among fluids complete the list.

Among medicinal substances a multitude of herbs are named, but especially the leaves and stalks of the castor-oil plant, used for this purpose in the Cape de Verd Islands under the name of Bofareira. The decoction appears to be harmless otherwise, and perhaps capable of exciting the secretion in a non-parturient female, if aided by suction. "This, however," says our author, "is an experiment to which I have never found a patient willing to submit herself, and so have not been able to prove it." Lastly, the value of iron and cod-liver oil in such cases is insisted on, and the frequent curability of the affection sums up the topics of the section.

Mothers should be dissuaded from suckling when suffering from specific disease, when their milk disagrees with the child, when it is incurably scanty, when they are themselves exhausted, and lastly when sore nipples are present. For the latter affection, Friar's balsam, glass shields, and artificial nipples are advised with the help of "some kind Samaritan,"—one of a race apparently gifted with considerable powers of suction. Moreover, treatment preventive of this disorder is enjoined for the two months preceding delivery, in the form of breast shields and astringent applications.

The choice of a wet-nurse leads to reflections on her selection from the class of fallen women; and the author, with much earnestness, urges an opposite view to the one recently advocated. He objects to such a choice on many grounds, especially fearing injurious influence on the household, frequent misconduct, and the indirect incentive thus afforded to a loose life, as well, perhaps, as to infanticide. Her physical qualifications of age, good milk, hereditary history, and the like, need not detain us, except to notice the strong preference given to females "of a melancholic temperament," on the ground that the milk of brunettes is richer than that of blondes.

In the third part are some general deductions in reference to alimentation from the composition of milk and its substitutes. The constituents of this fluid are passed in review, and compared with that furnished by asses, goats, and cows. The first of these animals furnishes a secretion so rich in salts as occasionally to produce purging, while it is deficient in casein and butter. The suggestion of adding 2½ per cent. of cream may be valuable in country districts, and is enforced by a remarkably startling fact in economics: this is the exceedingly low market-price of donkeys. "In many parts of Great Britain," says our author, "asses are to be obtained at a very cheap rate. I am told five shillings are, in some places, in winter, gladly accepted; and I believe thirty shillings is the usual price."

Goat's milk really appears to approach nearer to human than the preceding, and it seems that the foundlings of Dublin, many years back, were fed on goat's milk in the Wicklow mountains, the goats becoming tame, and learning to recognise their own foster-children.

Cow's milk, however, occupies the largest space; its adulteration, acidity, and morbid states are discussed at length; the unhealthy way in which London cows are kept forms a revolting picture. On the authority of Professor Gamgee we learn that "cows were found in several of the London cow-houses having abscesses on their udders discharging pus into the milk-pails." And "whereas country cows are insured at sixpence to sevenpence half-penny in the pound, London dairy cows at eighteenpence to two shillings in the pound." Well may the writer end this chapter with a benediction to Lord Llanover for his new Metropolitan Act.

Cream, concentrated milk, eggs, jellies, beef-tea, raw meat, the correction of inferior milk, and modes of making artificial human milk, are followed by notices of starch, arrowroot, bread, pap, and "Robb's biscuits." Contrary to ordinary experience, tea is spoken of favourably as a food for infants; but mainly on theoretical grounds, and in reliance on some rather vague statistics of Dr. Edward Smith.

The fourth part of this work gives more strictly Medical details on abdominal disease in infants, with a good chapter on nursery management, washing, bathing, exercise, and perambulators.

In taking leave of a rather lengthy but useful book, we cannot fail to hope that the subject standing intermediate between Medical and domestic matters will attract, as it will deserve, the attentive consideration of parents as well as of Medical men. That such is its intention we gather from the concluding remarks, which are true, in spite of some characteristic impetuosity. "I have wished to call the attention of the community to the subject of infant feeding as one fraught with difficulties and social evils of no ordinary kind. The food of our little ones must not be adulterated or poisoned, and parents who, by their ignorance, prove themselves unworthy to care for their children must be taught their responsibility."

Dentition and its Derangements. A Course of Lectures delivered in the New York Medical College. By A. JACOBI, M.D., Professor of Infantile Pathology and Therapeutics, etc. New York: Baillière, Brothers.

IT appears these lectures are re-published from the *American Medical Times*, partly owing to encouragement bestowed on them by this and other journals.

The author owns that the work should rather be termed a treatise on infantile pathology; from the number and variety of the subjects touched upon, the remark is fully justified. After the more special topics of the title, come accounts of gastro-intestinal diseases, of many affecting the skin, of urinary disorders, convulsions, laryngismus, and much other important matter, only remotely connected with the teeth.

Catalogue of the Pathological Preparations in the Museum of Guy's Hospital. Revised and Edited by Samuel Wilks, M.D., etc. Two vols., 8vo. 1863. London: W. Mackenzie.

The preface to these two handsome volumes states that thirty years have passed since Dr. Hodgkin published his descriptive catalogue of this fine museum. During that period the preparations have increased fourfold. Every old preparation has been re-examined; and, "in doing this, some very interesting discoveries have been made; among many others, typhoid deposits in the intestine, styled scrofulous, examples of 'Addison's disease' of the supra-renal capsules, and a specimen of 'chalky deposit in a muscle,' which, on microscopical examination, proves to be Trichina spiralis." Some good remarks follow, showing the occasional misuse of museums by investigators who thus seek "to discover the frequency of the occurrence of a particular form of disease."

In the first volume are contained specimens of diseases of bones and joints, of the heart and circulatory system, of the nervous system, integuments, and senses, of the vocal and respiratory organs.

The second volume begins with diseases of organs of digestion, followed by those of the urinary and male genital organs, and of the female genital organs and peritoneum. An appendix contains the most recent accumulations.

Each volume commences with a full analytical index, and below the description of individual specimens a history of the case is appended in all instances where it could be procured.

The great labour involved in such publications as this is amply justified by their high value. The richest museums are useless if ill-arranged or deficient in good descriptive catalogues.

De Laryngoscopia, ejusque Usus Practico. Dissertatio Inauguralis Medica, etc. Auctor, O. A. A. F. Berkholtz, Berlin.

Beiträge zur Laryngoscopie Ueber Neubildungen namentlich Polypen des Kehlkopfs. Von Dr. Georg. Lewin. 1862.

Ueber Krankheiten einzelner Theile des Larynx bedingt durch deren physiologische und Anatomische Eigenschaften. Von Dr. Georg. Lewin.

The writer of the first of these pamphlets, in some introductory remarks, gives the credit of laryngoscopy in its invention to Liston, mentions its subsequent revival for a specific purpose by Garcia, but attributes its real publication and practical employment to Czermak. He admits, however, its simultaneous use by Dr. Tuerk, of Vienna. He proceeds to speak favourably of the improvements introduced into its management by Dr. Lewin, the writer of the two following memoirs, and a teacher in the Berlin University. One at least of these publications seems a fulfilment of Dr. Berkholt's expressed wishes, that Dr. Lewin shall contribute more to the literature of a subject in which he appears to be well informed.

The former paper by Dr. Lewin gives abundant details, and some good drawings of polypi of the larynx, as seen laryngoscopically. Directions also follow for their extirpation by means of curved forceps, and treatment by the inhalation of "pulverized" fluids, on the system of Mathieu and Sales-Girons. It is reprinted from *Göschen's Deutscher Klinik* for 1862.

The second memoir is shorter, more general, and highly in favour of local treatment. Several of the cases cited are those of persons whose occupation as preachers or actors, leads to much loud speaking. Perhaps it would be well, if patients suffering from obscure laryngeal affections in this country were to take the hint, and obtain a careful examination of the part. Old complaints, passing under the head of "Clergyman's throat," might prove to be more susceptible of improvement than is attained by the ordinary medication of this rather vague and unsatisfactory malady.

The Physical, Moral, and Intellectual Constitution of the Deaf and Dumb, with some Practical and General Remarks Concerning their Education. By James Hawkins. 1863. London: Longman and Co.

A small book of about 100 pages, which, in spite of a rather magniloquent style, contains some curious facts, and evidence of extensive though undigested reading. The writer, in an apologetic motto, states on the title-page "that it was not meant for those that had already mastered this subject;" and the speculations in physiological and Medical matters do seem rather vague to a professional student. It may, however, prove instructive to the general reader.

The Principal Baths of Germany, France, and Switzerland, considered with reference to their Remedial Efficacy in Chronic Disease. By Edwin Lee, M.D., etc. Fourth Edition. 1863. London: J. Churchill and Sons.

The Watering-places of England considered with reference to their Medical Topography and Remedial Resources. By Edwin Lee, M.D., etc. Fourth Edition. 1863. London: J. Churchill and Sons.

The former of these two works appears the better, and contains some useful as well as readable information. The present edition is stated to contain much additional matter brought up to the present time, partly from the author's own observation.

The latter publication has at times a disagreeable guidebook tone, perhaps inseparable from its subject, and does not, for similar reasons, contain so much to interest the Medical man. Both, however, may prove valuable to invalids requiring change of air.

PROGRESS OF MEDICAL SCIENCE.

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Selections from Foreign Journals.

M. GIRALDÈS, OF PARIS, ON THE MYOSITIC ACTION OF THE CALABAR BEAN.

M. J. Giraldès, Professeur agrégé of the Medical Faculty of Paris, has introduced to the notice of the Medical Profession of France the important properties of the ordeal bean of Calabar. He has communicated to the Royal Academy of Sciences and the Imperial Academy of Medicine of Paris the results of an experimental investigation on the myositic action of this substance, undertaken in his wards of the Sick Children's Hospital. Abstracts of his papers have appeared in the *Comptes-Rendus*, in the *Gazette des Hopitaux*, of July 14, and in the *Bulletin Général de Thérapeutique* of July 15. The following is a slightly abridged translation of the last of these; it is entitled "The Calabar Bean, and its Antimydriatic Properties:"—

"The plant which produces this bean belongs to the natural family Leguminosæ, section Papillionacea; its botanical name is *Physostigma venenosum*. It is called by the natives of Calabar the Esere nut.

"Professor Balfour has given a detailed description of this plant, with illustrations, in the twenty-second volume of the *Transactions* of the Royal Society of Edinburgh.

"The fruit of this leguminous plant was known to be an active poison, and its toxical properties have been studied by Professor Christison, who published a communication in the *Monthly Journal* of Edinburgh for 1855 (No. 8, p. 193.)

"But the antimydriatic action of the bean was at this time unknown. This has been recently discovered by Dr. Th. R. Fraser, and described in his inaugural thesis presented to the Medical Faculty of Edinburgh in 1862. This investigation received a gold medal from the University of that city, and is now being published in the *Edinburgh Medical Journal* (July, 1863). Dr. Fraser here distinctly points out the property of the extract of Calabar bean to contract the pupil.

"After this, Dr. Argyll Robertson communicated to the Medico-Chirurgical Society of Edinburgh the results of some experiments which have confirmed the observations of Dr. Fraser (*Edinburgh Medical Journal*, March, 1863, pp. 815 and 860).

"Messrs. Bowman and Soelberg Wells, of London, have since shown that one or two drops of a solution of the extract of Calabar bean introduced under the eyelids produced a rapid contraction of the pupil, which phenomenon was apparent in a very short time.

"More recently, Professor Harley has reminded the Royal Medical and Chirurgical Society of London of the toxical properties of this substance.

"The Calabar bean is unknown here; precise botanical details could not be obtained from the most eminent of our botanists, and I had almost despaired of obtaining any of the beans, when, thanks to the kindness of Dr. Fraser, and the attention of M. Bourjeaurd, I have received a certain number, and have been able to try an extract prepared from them.

"The result of my experiments is as follows:—On eight children of the ages of three, four, six, twelve, and thirteen, whose pupils were normal, one drop of a solution of the extract in glycerine, placed under the eyelids with a fine brush, caused evident contraction of the iris in a few minutes; the pupils were sensibly diminished; in from fifteen to twenty minutes this contraction had reached the maximum, and the pupils had scarcely the diameter of half a millimetre (about one-fifth of a line). In several of these children the pupil had been dilated that morning by atropine, and this dilatation was complete at the time of the experiment (with Calabar bean); twenty minutes afterwards the size of the pupil was reduced to the minimum. These observations were confirmed by my colleagues, MM. Roger and Debout, and by M. Reveil, Pharmacien in Chef to the Hospital, as well as by all those gentlemen who attend the wards. Twenty-four hours afterwards the contracted pupil had resumed its previous state.

"The power of producing contraction of the pupil possessed by this substance does certainly afford an application of advantage in many affections of the eye. I have confined myself, in the meantime, to these particulars, purposing to continue my investigations on this important subject."—*Bull. Gén. Thérapeutique*, July 15, 1863.

ON VARIATIONS OF THE TEMPERATURE OF THE URINE.

By Dr. MANTEGAZZA.

Dr. **Mantegazza**, Professor of Pathology in the University of Pavia, believing that the usual modes of ascertaining the animal temperature, by applying the thermometer to the axilla, mouth, &c., are liable to error, instituted a series of experiments upon the temperature of the urine. These amounted to several hundreds, and furnished the following results. 1. The temperature of the urine was at its minimum during the night. 2. After 5 a.m. it gradually increased, attaining its maximum between 10 and 11 a.m. 3. After this hour it slowly decreased to again rise, attaining a second maximum at about 5 p.m. 4. The temperature attained at 10 a.m. and 5 p.m., were nearly equal, and these maximum points were independent of the hour at which food was taken. 5. After 5 p.m. (the usual dinner hour of those experimented upon), the temperature always diminished. 6. The experiments were conducted between the months of February and August, and the minimum temperature observed in February, (36·4° C.,) differed by 1·55° from that of July, (37·95° C.,) corresponding to a difference of 28° of the external atmosphere. 7. The exercise of the genital functions did not influence the temperature of the urine. Dr. Mantegazza also furnishes the results of 241 observations made upon himself during a voyage made to and fro between Bordeaux and Buenos Ayres. 1. The temperature of the urine increased or decreased in correspondence with the external temperature, but not when the changes of the latter were only slight. 2. The rapid changes of external temperature on the voyage amounted to + 25° C., while those of the urine reached 3·25° C. 3. During the passage from a warm to a cold temperature it lost more caloric than it gained under the reverse circumstance. 4. The sensations of cold and heat are accompanied by corresponding changes in the temperature of the urine. 5. Exposure to the sun for some time caused an increase of temperature in the urine of 1°. 6. Alcoholic drinks also increased it. 7. Sea-sickness exerted no sensible influence. 8. The sense of *malaise* produced by a variety of causes, independently of vascular erethism, is always attended with an increase in the temperature of the urine, which, however, rapidly diminishes on the occurrence of sweating. 9. Muscular exercise increases the temperature of the urine. 10. A short time prior to the occurrence of vascular erethism, or true fever, there is an increase in its temperature.—*Annali Omodei*, vol. clxxxii., p. 624.

ON INFLAMMATION OF THE BRAIN FROM OTITIS WITHOUT CARIES.

By Dr. GRUBER.

Dr. **Gruber**, one of the Physicians of the Vienna Hospital, read a paper upon this subject at the Medical Society. While admitting the justice of Lebert's statement, that disease of the ear is usually propagated to the brain owing to the propinquity of the sinuses of the dura mater, yet the question remains whether such propagation would take place in simple internal otitis unaccompanied by caries. A case which has occurred in the Hospital leaves no doubt upon the subject. Inflammation from external injury arose within the right ear (which had previously been quite healthy), and extended to the right transverse sinus, and thence, by means of the inferior cerebellar veins, to the cerebellum. An acute pleurisy with purulent exudation terminated the patient's life. The most careful examination of the temporal bone and the ossicula failed to detect the slightest trace of caries. The author is not aware of another case being on record, in which, independently of any affection of the bones, the course of the inflammation has been so well-marked. This case shows the importance of early derivative measures, as repeated leeching, the cautery, etc., as also the securing a sufficiently large opening in the membrana tympani for the discharge of the pus. In by far the great majority of cases the sinus transversus is the means of propagation, and only seldom one of the sinus petrosi. This can only arise from the anatomical relations of the sinuses to the cells of the mastoid process; and to elucidate this Dr. Gruber has made numerous autopsies of healthy ears, and has found, as a general rule, that the entrance to the cells is not in the posterior wall of the cavity of the tympanum, but in the posterior section of its internal wall. There usually is found an aperture from one to three lines long, which is prolonged into a canal that extends to the series of cells in contact with the transverse sinus. Sometimes there is also a communication with these cells through the posterior wall of the tympanum. In the new-born infant the few large cells of the process are but a continuation of the tympanum, and are separated from the sinus by a pretty thick wall of spongy bone. This wall, in proportion as the number of cells of the process increases becomes thinner, and is the thinnest at the period which elapses between the cessation of the cellular formation and the recommencement of their ossification. It is sometimes partially wanting, the wall of the sinus being in contact with the lining of the cells of the mastoid process. In older persons the wall again becomes thickened, sometimes to the extent of a line or more. This explains why it is that internal otitis is most liable to induce fatal inflammation of the brain between the ages of 18 and 30, the age of 46 being the oldest at which it has been known to do so. So, too, notwithstanding the frequency of otorrhœa in children, such fatal issue is proportionally very rare, inasmuch as the wall of separation, though spongy, is also thick in proportion. Professort Arlt remarked that the veins must not be regarded as the sole source of propagation of the inflammation, as this may take place also by means of the thin bony wall, as might be expected from the analogous conditions under which orbital abscess is formed.—*Wochenblatt der Aerzte in Wien*, 1862, No. 22 and 25.

EXCERPTA MINORA.

Case of Enterotomy.—Dr. Reali relates the following case:—A countryman of limited capacity had introduced a piece of wood into the rectum nine days before he applied to the Hospital of Orvieto, complaining of severe pain in the abdomen. On exploration, the finger was able only just to reach the point of a piece of wood lying surrounded by the turgid mucous membrane in the direction of the hollow of the sacrum. Numerous attempts were made with various instruments to extract the foreign body without success, and, as the patient suffered greatly, an incision was made in the left iliac region. The finger having been introduced, it was found that the foreign body having passed into the sigmoid flexure, this latter was distended, and forced to the mesial line, the body it contained rising as high as the navel. The intestinal wall was incised, and a truncated cone of chesnut wood (irregularly shaped, and measuring twenty-five centimetres in length, and from nine to ten in diameter) was removed. The wound in the intestine was closed by Jobert's procedure, and oily purgatives were administered. Great meteorism, entero-peritonitis, and an iliac abscess were among the sequelæ; but the patient recovered, and remained well when seen two years afterwards.—*Omodei's Annali*, vol. clxxxii., p. 493. [In the *Deutsche Klinik*, 1863, No. 3, Dr. Scholz relates an interesting example of successful enterotomy, performed for ileus upon a woman 28 years old.]

A **Great Want.**—Writing to the *Clarence and Richmond Examiner* from the village of Maclean, the correspondent of that journal says:—"The want of a Medical man is much felt on the lower part of the river. A party is about to try if a sufficient sum can be raised to encourage one to settle at Lawrence, with a certain sum guaranteed yearly for his maintenance, and to keep a boat in readiness."—*Sydney Mail.*

FOREIGN CORRESPONDENCE.

GERMANY.

BERLIN, July 9, 1863.

PROFESSOR TRAUBE still continues his important researches on febrile affections, some of which I have already communicated to you a short time ago. The question, which was hitherto more especially enveloped in obscurity, was that as to the cause of the increase of temperature, which is the very essence of fever, and of which the increased rate of pulsation and respiration are only the consequences. The increase of temperature itself is, according to Prof. Traube, due to a stronger contraction of the contractile fibre-cells of the blood-vessels, and chiefly of those of the smallest arteries. Owing to the contraction of these minute vessels, less blood is carried to the capillaries in a given space of time, and the pressure upon their internal surface is also diminished. The cooling of the blood is therefore retarded, and at the same time there is less absorption of liquor sanguinis by the tissues. Less water being carried to the superficial strata of the skin and the lungs, evaporation from these surfaces is of course diminished, and thus another cause for a lesser cooling of the body is put into play. By this hypothesis all and every symptom of fever may be easily explained. Thus we find that during the rigor, the turgor of the skin and of the subcutaneous cellular tissue is diminished, the small arteries which are accessible to examination are contracted, the hands, the feet, and the nose are cooler than usual, while the temperature of the blood itself is increased.

Which is, then, the cause of the contraction of the arteries? This cannot be the same cause as that which acts if we expose ourselves to a low temperature; for in febrile patients the thermometer shows that the blood is warmer than usual. It is only possible to assume that the vaso-motor system of nerves is excited in a powerful manner, the consequence of which is the contraction of the smaller arteries. It has been shown by the researches of Prof. Von Baerensprung that the heat is already increased before the rigor sets in, but that it increases much more rapidly during than before the rigor. This may be explained by the circumstance that any poison acts the more intensely upon nervous matter the larger the quantity of it that is accumulated in the blood; and its accumulation in the blood necessarily depends upon the degree of activity in the organs of secretion by which it is eliminated. In the commencement of the febrile paroxysm the quantity of fever-poison in the blood is so small that only a slight contraction of the arteries is thereby caused. The immediate consequence of this latter, however, is a diminished activity of the organs of secretion. At the time the rigor sets in, the quantity of the fever-poison in the blood is so considerable that it may exert its full effect upon the vaso-motor system of nerves, and the maximum of contraction of the blood-vessels is thus produced. If this maximum has been attained, the temperature of the blood must necessarily be rapidly increased, as the cooling of the body is nearly reduced to its minimum. Striking rigors are only observed if there is a sudden increase of heat, as, for instance, in ordinary pneumonia; while in such acute diseases where the temperature is slowly augmented, as, for instance, in typhoid fever, there are only shiverings.

A very frequent symptom in typhoid fever is the dry tongue, while this is very rare in rheumatic fever. This difference might, perhaps, at first sight, appear to be due to the more considerable evaporation of water from the mucous membrane of the tongue in typhus patients, because these breathe with the mouth open; or to the temperature, which is, on the average, higher in typhoid than it is in rheumatic fever. But, on further consideration, neither of these two views appear satisfactory; for there are patients with rheumatic fever who breathe with the mouth open, and they may show the same degree of heat as in typhoid fever, yet the tongue remains moist. On the other hand, there are typhus patients who, in spite of a high temperature and open mouth, have a moist tongue. According to Professor Traube, the condition of the mucous membrane of the tongue is solely dependent upon the state of the brain, whatever may be the nature of the acute disease. As long as a patient has sense enough to satisfy the want of moistening his tongue (which is indicated to him by the feeling of thirst) at the right time and in the right manner, the tongue will remain moist. Thus, we perceive that in typhus patients the tongue is moist as long as they preserve their consciousness. From this we may infer that in every febrile patient the tongue is liable to become dry. The commencement of this state is indicated by the feeling of thirst; the disposition to it is due to a deficient supply of water to the superficial strata of the mucous membrane, and this is again due to a contraction of the smallest arteries.

Amongst the symptoms of fever, loss of appetite and weak digestion are nearly as constant as thirst. They likewise come on not gradually, but almost as suddenly as thirst. They are in the same manner to be explained to want of arterial blood in the mucous membrane of the stomach, which is again due to the tetanic condition of the small arteries of this membrane. The constipation which is observed in most acute diseases, unless there should be special functional or structural disturbances of the intestinal mucous membrane, is owing to the same cause.

GENERAL CORRESPONDENCE.

ENGLISH LOSSES IN CENTRAL AFRICA.

LETTER FROM DR. LIVINGSTONE.

[To the Editor of the Medical Times and Gazette.]

SIR,—In a leading article in the *Medical Times and Gazette* of July 5, 1862, headed "English Sacrifices in Central Africa," after remarking on the general sickness that prevailed at the mission station Magomero, you very naturally ask "How, then, can we reconcile these sad facts with the statement that 'the mission under the direction of Dr. Livingstone settled down in an admirable station high up the river, where the country is an elevated plateau, where the climate is tolerably salubrious, and where a dense population is immediately available for missionary work.'" The quotation is from the Bishop,(a) and expresses the opinion which I formed, and still hold, as to the general healthiness of the plateau referred to. The spot, taken as a temporary residence until extensive acquaintance with the whole region should enable the head of the mission to select a suitable locality for a permanent abode, was forty or fifty miles distant from the "Elephant Marsh," and at an altitude of between 3000 and 4000 feet above it. We shall therefore try to think of the marsh and mission station as distinct as Oxford and London. The plateau is ten or twelve miles broad, and probably 100 in length. We happened to travel along it at the hottest season of the year, and even then found the climate deliciously cool. When previously in the Upper Shirè valley, at an altitude of 1200 feet above the sea, we were drinking water at 84°, and in one day mounting up to an altitude of between 3000 and 4000 feet, we had every few miles a gushing stream, with the water at 65°. The air had that bracing effect which the mountain breezes have at home, and we were all struck by observing far more very old people than we had seen anywhere else. Our stay was too short for our own experience to be worth anything; and the experience of the missionaries amounts only to this, that without ordinary sanitary precautions the health is endangered here as it is everywhere else.

The missionaries were placed in very peculiar circumstances, and such as probably they never anticipated. As we climbed up the plateau together, and felt its refreshing breezes, we met parties of Portuguese, with long lines of bound captives in their possession. These were soon made free, and the Bishop, trusting to the support of those who had sent him, bravely took charge of them. These re-captives soon amounted to 200; but in what follows I have only the testimony of the missionaries themselves, for I then left, and pursued the exploration of Lake Nyassa for some 225 miles. Magomero was situated on the bend of a small river of exactly the same shape as that into which General MacClellan, for "strategic reasons," ran. It was shaded by lofty trees, which the poor Bishop admired exceedingly, and resolved to preserve. The efforts of the missionaries failed to prevent these 200 people from depositing their droppings all over a space of less than 100 yards by 50, and it then was fitly described as a "pest hole." For some months the people adjacent and around them brought abundance of provisions for sale, and no one imagined that these were all their surplus stores; but after the expenditure of the surplus came famine. The missionaries nobly shared their own provisions with the poor wretches whom they had adopted, and were reduced to the same hard and scanty fare. About fifty of the natives perished by ulcers and dysentery, and to me the wonder is, not that in that foul den the whites presented the sorry figure you have drawn, but that they were not all cut off together. Now, don't blame them; they felt the necessity of removing out of the pest hole, but the grass had all been burned off, and new huts could not be built; slave-hunting, at the instigation of the Portuguese of Tette, was going on all around them; they were in new and untried circumstances; had to retire to the lowlands; but still all think that the plateau is the healthiest abode, and will return as soon as possible.

(a) The late Bishop Mackenzie.—ED.

The Bishop, whose untimely fate every one who knew him must deeply deplore, never spared himself, and was foremost in depriving himself of the comforts, which you rightly conclude, are indispensable to Europeans, in order to save his orphan children.(b) He and Burrup were the strongest of the party, and were proportionately disregardful of their health. Exposed for more than a week previously to hard, fast marches, worse fare, and drenching showers, he set out from Magomero, ill with diarrhœa, on his last and fatal trip, and began by walking through the stream, remarking that he would soon be wet at any rate. After two days' walking in a plight which you may imagine, he reached the Shirè, embarked in a miserable small canoe, and after dropping down the stream one day was upset, lost clothes and medicines, and went on, of course, still wet—coffee, tea, and sugar all gone; it is scarcely possible to conceive a more doleful plight: but let any one go through the same amount of exposure in England, and he will as certainly be cut off by consumption as the Bishop and Mr. Burrup were by fever and dysentery. When I began to travel I walked through streams, and braved rains in the same way the Bishop did; but I found that I had fever perpetually, and gave up the habit, though it was really pleasant to have the extremities cooled. You will perform a good service if you warn all Europeans going to the tropics to take as good care of their health there as they do at home. In addition to the loss of invaluable services, these untimely deaths are a great misfortune to the cause of African civilisation, because people immediately ascribe them to the inevitable effects of the climate, and with you say "it is of no use to send missionaries where they cannot live." In our expedition, though we have undergone exposure to which no missionary need subject himself, we have had but two deaths among a large number of Europeans in four years, and these were caused by detention sorely against our will in most unwholesome localities.

No great work can be accomplished without pain and suffering, and even death. Those who, with you, "would not say a word to damp the energy of missionaries and of those that send them," must expect to hear cases like that of the noble-minded Indian officer who lately fell a victim to gigantic labours during the Indian famine, or that of Lord Canning, and try to place a slight drag on the imagination. Horror seems to lay hold on you at the bare mention of "Elephant Swamp." I am actually to pass through it to-morrow, and am only sorry that the enormous herds of elephants—we have seen eight hundred in it at once—have become so knowing we have no chance of getting a steak or a foot. But see the effects of bad example: my imagination, do as I will to prevent it, obstinately pictures you sitting on that wilderness of eight hundred cesspools, which the commissioners only the other day swept away, and drinking water mixed, according to Dr. Acland, with all the abominations and unutterable filthinesses which are poured out of Oxford, Reading, etc., into your cup. Oh! you filter your water through a few inches of sand, do you? I would not trust it (unless I were in London) though filtered through the Great Sahara. The delicious unconsciousness with which you exclaim "Elephant Marsh; good heavens! what a vista of deep swamp, rotting vegetation, flies, vermin, stinks, agues, and dysentery do the words call up!" only excite a merry laugh, which I beg you to believe has not one particle of ill-nature in it, and the quotation,

"Oh, wad some power the giftie gie us,
To see oursels as others see us."

You have actually a larger area of cesspool and marsh around and above London than exists in the Elephant Swamp, and to the direful effects let typhus, typhoid, diphtheria, cholera, consumption, scrofula, etc., testify. Here they are absolutely unknown. But our fever, if ill-treated, as by bleedings, or not treated, as it was in the case of the missionaries at Linyanti, who took only a little Dover's powder, is as fatal as any two in your catalogue. And while it would be "penny wise and pound foolish" to make missionaries of inferior men, good men ought invariably to be accompanied by a thoroughly educated and well-paid Medical officer.

I am, &c.

River Shirè, January 26. David Livingstone.

We have just heard the sad tidings that the Rev. H. C. Scudamore has been cut off by fever about forty miles above this, but not on the plateau. In this case there seems to have been no undue exposure. He was skilfully treated by Dr. Dickenson. I am bowed down in grief for our beloved Scudamore. This case is different from those on which I have remarked.—D. S.

Elephant Marsh, January 27.

CASE OF PREGNANCY AFTER OVARIOTOMY.

Letter from Dr. Edward Dewes.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the Number of your Journal for June 14, 1862, appeared the details of a case of ovariotomy as performed by Mr. John Clay, of Birmingham, upon a patient of mine, a young lady, 23 years of age.

In the course of the operation, it became necessary to remove a very large portion of wounded omentum, measuring nine inches by seven inches. This was effected by the actual cautery, a new instrument, an adhesion clam, invented by Mr. Clay, being used for the purpose, drawings of which, together with some remarks upon its use, appeared in the Number for June 21.

The operation was performed on April 1, 1862. The patient's progress to convalescence was uninterrupted, menstruation returned on May 22, and I have now the pleasure of reporting that she gave birth to a fine female child on June 13, 1863, fourteen months and a fortnight after the operation. The process of parturition was unattended with difficulty, except that there was retained placenta from hour-glass contraction of the uterus. The exhausting effects of the processes of gestation and parturition upon the patient's system, following so soon upon such a formidable operation as ovariotomy, were, indeed, very great. Her pulse remained excessively slow, feeble, and irregular for many days, requiring the free administration of stimulants and nourishment.

I am, &c.

Coventry. Edward Dewes, M.D.

OBITUARY.

DR. JOHN MOORE NELIGAN.

Dublin has, within the last ten days, lost another of her celebrities. It is really appalling to reflect on the number of the more prominent members of the Profession in the Irish metropolis who have been removed by death within the last few years. The veteran Peile, of

"Ingratiating manners, feeling mind,
His hand as steady as his heart was kind,"

whose decease we recorded in our first volume for 1858, was followed to the grave in rapid succession by Harrison, Crampton, Montgomery, Marsh, Porter, and Cusack. Of their contemporaries, Wilmot, Carmichael, Colies, Cheyne, had gone not very many years before. Most of all these had, however, attained the threescore years and ten, stated on high authority to be the natural limits of human life, and some had been so strong that they had come to fourscore years and more; but it is now our melancholy task to announce the removal, in the prime of life, of one whose name has, almost from the period of his entrance into the Profession, been conspicuous in the pages of Medical literature.

John Moore Neligan was born in the town of Clonmel, in Ireland, where his father practised as a Physician, in the month of June, 1815, one week after the eventful battle of Waterloo. At the time of his decease, on July 24, 1863, he had, therefore, little more than completed his 48th year. Having passed through the necessary courses of preliminary and Medical education, he graduated as M.D. in Edinburgh in 1836. As a writer, his earliest essays appeared in the *Dublin Journal of Medical Science* and in the *Edinburgh*

(b) The orphans of the liberated slaves.—Ed.

Medical Journal. His work on "Medicines; their Uses and Mode of Administration," has passed through five editions, and a sixth is in preparation. In 1848 he was selected by the late Dr. Graves to bring out the second edition of his far-famed "Clinical Medicine." Among his other works were his "Atlas of Cutaneous Diseases," and his "Practical Treatise on Diseases of the Skin." More particularly in this specialty he enjoyed an extensive practice. From 1849 to 1861 he was the able, diligent, and impartial editor of the *Dublin Quarterly Journal of Medical Science.* At home and abroad his professional reputation was deservedly high. In 1853 the University of Dublin conferred on him the honorary degree of Doctor in Medicine. He was a Fellow of the King and Queen's College of Physicians in Ireland, and an honorary member of the Medical Societies of Sweden, Athens, Cork, Belfast, etc., and of the Pharmaceutical Society of Great Britain. He was for some time Physician to Jervis-street Hospital.

Though Dr. Neligan's death was unexpected, and his last illness of only one week's duration, those who knew him well had long been anxious as to his state of health. In 1857 he laboured under albuminuria, and he was, to all appearance, breaking up. By the advice, however, of the late Sir Henry Marsh and of other Medical friends, he adopted the plan of sleeping out of town, to which, during the remainder of his life, he steadily adhered. This measure was attended with the best results, and he seemed for a time to have regained his original health. But there is no doubt that the renal disease continued its insidious course, and rendered him unable to contend against the acute attack—produced by incautiously wearing damp clothes—of which he died. On Thursday, July 16, while out in his carriage, he was attacked with sickness of stomach and shivering. Nevertheless, he drove into town the next day as usual, but remained only an hour, and on returning to his residence at Monkstown, took to bed, from which he never again rose. His symptoms were at first those of acute rheumatism, but indications of uræmic poisoning eventually supervened. He was quite aware of his critical state, and joyfully and thankfully expressed the fullest assurance of salvation through the finished work of his Saviour.

MEDICAL NEWS.

◆

Royal College of Surgeons of England.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 21st, 22nd, and 23rd insts., and when eligible will be admitted to the Pass Examination:—

George Covey, T. H. W. Davies, A. J. Wallis, J. H. Simpson, J. B. Thomas, C. C. Brewer, J. L. Price, W. Battye, R. A. Jones, and T. E. Roberts, students of St. Bartholomew's Hospital; Charles Davidson, Robert Baker, William Carter, Thomas Evans, P. S. Fentem, W. H. Jameson, and J. R. Oliver, of Edinburgh; J. W. Legg, John Williams, J. S. Wallbridge, J. L. LaMert, Charles Read, and J. J. Coxeter, of University College; J. W. Smith, C. F. Long, Alfred Charlton, J. R. Leake, G. F. E. Wilkinson, and F. W. Armitage, of Guy's Hospital; Thomas Scott, John Rodgers, Warren Meade, C. J. Weir, and Andrew O'Flynn, of Dublin; T. W. Green, Thomas Fielding, and P. B. Mason, of Glasgow; J. C. Duke, Frederick Bolders, and Richard Hughes, of King's College; G. H. Watson, T. J. K. Richmond, and Walter Hardin, of St Thomas's Hospital; Walter Haxworth, J. B. Peacock, and E. N. Dibb, of Leeds; John Murray, James Ledingham, and Owen Evans, of Aberdeen; James McCully, James Hanna, and Gawin Orr, of Belfast; John Bradley and J. L. Molyneux, of Liverpool; William Gates and C. St. A. Hawken, of the Westminster Hospital; George White and W. A. Sparling, of the London Hospital; W. A. Rudd and Benjamin Locking, of Hull; J. H. Bryant and P. E. Hill, of St. Mary's Hospital; A. C. Rayner and J. T. McMahon, of the Charing-cross Hospital; R. J. F. Leith and W. B. Drinkard, of Paris; Alfred Grace, of Bristol; J. F. Foster, of St. George's Hospital; Francis Grealy, of Galway; Edward Norton, of the Middlesex Hospital; W. H. Flint, of Manchester; John Fulton, of Toronto.

The following gentlemen, having undergone the necessary Examinations for the Diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 28th inst., viz.:—

William Parsons Knott, Blisworth, Northamptonshire; James Jonathan Watson, Kilburn; William Hughes, Eglwyswrw, Pembrokeshire; James Folliott, Canonbury; Stanley Lewis Haynes, Pall-mall; Warner Atkinson, B.A. Lond., Harrington-square; Warren Meade, Midleton, Co. Cork; Charles Jeremiah Renshaw, M.D. St. Andrews, Ashton Mercy, near Manchester; Richard Philip Lisle, Cardiff; Walter Frost, Portland; Morden Wright, Islington; John Rodgers, Omagh, Co. Tyrone; David Hughes, Cilian Ayron, Cardiganshire; Thomas Scott, Omagh, Co. Tyrone; Henry Willan Jackson, Cumberland-terrace, Regent's-park; Rowland Hills, Newcastle-on-Tyne; Thomas Samuel Barrow, M.D. St. Andrews, Chelsea; Edward Webber Warren Meyrick, Cork; Thomas Thyne, Edinburgh; Joshua James, Bristol; George Bishop Cornish, Taunton; William Reuben Booth, Great Queen-street, Westminster; John Whiteley, Wakefield; John Kennedy, Edinburgh; Walter Simpson, Islington.

Admitted on the 29th inst.:—

William Davenport, Kidsgrove, Staffordshire; Frederic Morley, Bicker, Lincolnshire; Frederick Page Atkinson, L.S.A., Romney-terrace, Westminster; Josiah Court, Warwick; Wm. Frederick Hughes, Barnsbury; Joseph Morris, Birmingham; John Ure, Birmingham; Robert Whittington Lowe, Edinburgh; Edward Brewster, Grantham; John Thomas Jones, L.S.A., Tremadoc, Carnarvonshire; Robert Wills Soper, Dartmouth; Churton Gillman Pauli, Amsterdam; Henry Wilson, Ulverstone; Charles Forrester Bullmore, Falmouth; John Fleming, Ulverstone; Arthur Geo. Mickley, Buntingford; Henry Brietzcke, H.M. Dockyard, Deptford; Edward Thomas Blake, Taunton; Henry Osborne Fawcett Butcher, Ware, Herts; George Starling, Old Charlton; Edward Crestwell Hadon, Dudley, Worcestershire; Alexander Bottle, Dover; Henry McKenzie Parkes, Woolwich; and Frederick William Coates, Salisbury.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, July 23, 1863:—

William Carter, Newbury, Berks; William Daly Moore, Dublin; Edwd. Jeffery, Nantyglo, Wales; Ebenezer Atherton, Bingley, Yorkshire; John Bailey Grewcock, Falkingham, Lincolnshire; Richard Philip Lisle, Cardiff.

Also on the 28th:—

Carey Pearce Coombs, Frome, Somersetshire; Belling Harvey Mudge, Bodmin, Cornwall; John Walker Martindale, Windermere; Basil Ringrose, Potter's Bar, Middlesex; Albert Luis Fernandes, Sandal Magna, Yorkshire; John Thomas Jones, Tremadoc, North Wales; John Burn, Dartford, Kent; John Palmer Gannon, London; Richard Shillitoe, Hitchin, Herts; John Blount Fry, General Hospital, Birmingham.

The following gentlemen also on the 23rd passed their First Examination:—

Chas. Frederick Knight, Charing-cross Hospital; Charles Read, George Jackson, and Thomas Henry Green, University College; William Geo. V. Lush. George Alex. Augustus Coats, and George Vincent Langworthy, St. Bartholomew's Hospital; Thomas Henry Knott and Henry Viant, Guy's Hospital.

Also on the 28th:—

Henry Octavius Steel, Frederick Manser, John Arthur Ensor, Henry Dawson, Chas. Frederick Long, and Henry Broughton, Guy's Hospital; John Craigie, London Hospital; John Tasker Evans, St. Bartholomew's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Barnes, Robert, M.D. Lond., has been appointed Obstetric Physician to the London Hospital.

Cape, Lawson, F.R.C.P. Lond., has been elected Consulting Physician to the General Lying-in Hospital.

Clarke, James Ferriers, L.R.C.S.I., L.K. and Q.C.P.I., etc., has been appointed Assistant-Surgeon to the 4th Administrative Battalion Lancashire Royal Volunteers.

Clarke, John, M.D. St. And., has been elected Physician-Accoucheur to the General Lying-in Hospital.

Cox, W. Sands, F.R.C.S. Eng., has been appointed Consulting Surgeon to the Queen's Hospital, Birmingham.

Denham, John, M.D. Edin., has been appointed Examiner in Midwifery, etc., in the Queen's University, Ireland.

Gascoyen, George G., F.R.C.S. Eng., has been elected Surgeon to the Lock Hospital.

Goode, Henry, M.B., has been elected Surgeon to the Derby Provident Dispensary.

Hinds, C., M.R.C.S. Eng., has been appointed Resident Clinical Assistant to the Middlesex Hospital Medical College.

Kennedy Henry, M.B. T.C.D., has been appointed Examiner in Medicine in the Queen's University, Ireland.

Meadows, Alfred, M.D. Lond., has been elected Physician-Accoucheur to the Out-Patients of the General Lying-in Hospital.

Newman, A. J., M.R.C.S.E. and L.S.A., has been elected House-Surgeon to the North Devon Infirmary, Barnstaple.

Parker, Nicholas, M.D. Lond., has been appointed Physician to the London Hospital.

Radcliffe, Charles B., M.D. Lond., has been appointed Physician to the Hospital for Epilepsy.

Robertson, J., L.D.S., R.C.S. Eng., has been elected Dental Surgeon to St. Bartholomew's Hospital, Rochester.

Shillitoe, Buxton, F.R.C.S. Eng., has been appointed Surgeon for Out-Patients to the Lock Hospital.

Smith, Aquilla, M.D. T.C.D., has been appointed Examiner in Materia Medica and Medical Jurisprudence in the Queen's University, Ireland.

Smith, Dr. J., F.R.C.S.E., Surgeon-Dentist, Edinburgh, has been elected Dental Surgeon to the Royal Infirmary, Edinburgh.

DEATHS.

Barker, Francis Oliver, M.D., of H.M. 99th Regiment, at Meerut, India, on June 9.

Betty, John, M.D. Glasg., at Eccles-street, Dublin, on July 18.

Carter, William Frederick, M.D., R.N., at Haslar, on July 23, aged 72.

Churchill, James Morss, Watford, M.R.C.S. Eng. 1820, L.S.A. 1819, (Guy's and St. Thomas's), late Coroner for the Borough of Colchester; formerly Surgeon to the Royal Infirmary for Children, London; Medical Attendant Essex-hall Asylum for Idiots, Colchester; Author of "Treatise on Acupuncture," "Medical Botany and Vegetable Toxicology," on July 27, aged 66.

Dusautoy, Henry, L.R.C.P. Edin., at 7, Sussex-place, Southampton, on July 19, aged 54.

Gray, John, M.R.C.S. Eng., at 25, Old Burlington-street, on July 22, aged 75.

Moore, W. Fisher, M.R.C.S. Eng., at Preston, Lancashire, on July 14, aged 51.

Neligan, J. Moore, M.D. Edin., at Clonmel-house, near Blackrock, Ireland, on July 24.

Ogilvy, James, M.D. Edin., at Coventry, on July 25, aged 54.

Reilly, Philip, L.R.C.P. Ed., J.P. for Hertford, at the Hotel de Normandie, Rue St. Honoré, Paris, on July 25, aged 57.

Wallich, N. D. S., Surgeon H.M. 1st Bengal Cavalry, at Dugshai, Simla, India, on June 9.

Wells, E., at Metfield, Suffolk, on July 11, aged 52.

M. Velpeau has denied the accuracy of the statement, which has run the round of the Paris papers, that he is about to visit Constantinople.

Charing-Cross Hospital Medical College.—The annual distribution of the prizes took place on Monday, July 27. The following gentlemen were the successful candidates: — *Anatomy* — Silver Medal, Mr. Charles Frederick Knight. First Certificate, Mr. Henry Willson; second ditto, Mr. Frederick Le Fevre Milburn; third ditto, Mr. John William Jones. Bronze Medal, Mr. William G. Sutcliffe. Certificates, Mr. A. R. Verity and Mr. R. Y. V. Packman. *Chemistry*—Silver Medal, Mr. Other Windsor Berry. *Medicine*—Certificates, Mr. Thomas Langston and Mr. C. F. Knight. *Physiology*—Silver Medal, Mr. C. F. Knight. Bronze Medal, Mr. O. W. Berry. *Surgery*—Silver Medal, Mr. Edward Dyer. Certificate and Book, Mr. William Burt Shorto. Bronze Medal, Mr. W. G. Sutcliffe. *Materia Medica*—Silver Medal, Mr. Allen Fennings. Certificate, Mr. H. Willson. *Botany* - Silver Medal, Mr. O. W. Berry. *Midwifery*—Silver Medal, Mr. J. H. Simpson. Certificate, W. H. Cope. *Forensic Medicine*—Silver Medal, Mr. J. H. Simpson. Certificate, Mr. W. H. Cope.

The Conversazione at the Royal College of Physicians.—On Saturday evening last the annual *conversazione* given by the President and Fellows of the College of Physicians took place. On previous occasions we have spoken of the perfect arrangements for the reception and entertainment of the guests which distinguish the College *soirées*. In this respect that of Saturday last was no whit inferior to its predecessors. The College Library was not so crowded as we have sometimes seen it, but the greater coolness atoned for absentees. Amongst the celebrities present were Lord Wensleydale and the Master of the Mint. Many objects of scientific interest were displayed on the library tables; amongst them some small aneroid barometers, the size of a watch; Mr. Whiting's newly-invented barometer without a cistern; magnificent specimens of works of art in aluminium and aluminium bronze, contributed by Mappin Brothers; specimens of metallic thallium, and of magnesium; a variety of microscopes and microscopic objects; amongst the latter some beautiful preparations of the large cells of the cerebral grey matter of man, the dog, cat, and sheep, prepared by Dr. L. Beale. Mr. Frank Buckland sent a collection of weapons from Central Africa, and a pair of Brobdignagian shoes which had belonged to some recent Goliah; and Mr. J. L. André exhibited the model of a house-top converted into a pleasure-ground after the plan proposed by Dr. Debell.

Death from Caustic Alkali.—On Tuesday, July 28, Dr. Lankester held an inquest, in Clerkenwell, on the body of Eliza Bartlett, aged 53, a woman of intemperate habits, who had poisoned herself with potash. On Thursday afternoon the door of her room in Red Lion-yard was found to be locked, and her son, a little boy, forced it open, and found his mother crouched up on the bed. She exclaimed, "Police, police! I have poisoned myself." The boy found a pot with some hard substance in it, and a cup which had been used. Mrs. Thomas, a neighbour, who had heard the deceased vomiting before her son went home, and who thought it was only her customary condition, sent the hard substance to a chemist on Mount Pleasant, who refused to go, and told the boy to throw the stuff away. He went into Leather-lane, and at a druggist's shop was told it was potash. At length Mr. Gibson, a Surgeon in Bagnigge-wells-road, was sent for, and immediately attended. The poor woman died on Saturday night, and Mr. Gibson, on making a post mortem examination, found the body highly inflamed from the burning nature of the potash. The jury asked whether her life might have been saved had Medical attendance been procured sooner. Dr. Lankester feared not. Potash acted on the coats of the stomach like oil of vitriol, and by its burning nature destroyed the parts it touched. What appeared strange to him was that any chemist should have told the boy to throw away the stuff he produced. The jury returned a verdict of "Temporary Insanity."

Derbyshire General Infirmary.—In consequence of the Governors of this Institution being unable to meet with a Physician willing to undertake the duties, they resolved to appoint a General Practitioner. The election took place on Monday last, at the Infirmary, the Hon. and Rev. F. Curzon in the chair. Colonel Gooch proposed, and Mr. Alderman Gadsby seconded, the nomination of George Taylor, M.D., M.R.C.S., and L.S.A. Dr. Peach proposed, and Mr. Lewis seconded, the nomination of Charles Borough, M.R.C.S., and L.S.A. At the close of the poll the numbers were,—for Dr. Taylor, 166; for Mr. Borough, 109. Majority for Dr. Taylor, 57. Dr. Taylor returned thanks in a suitable speech.

Adulterated Yeast.—In a recent inquiry at Hull, Dr. Letheby stated that he had examined six samples of Dutch yeast which had been seized at Hull, and sent to him for examination. He found that the first of these contained 58 per cent. of moisture, 13 per cent. of clay, and 31 per cent. of dried yeast; the second sample contained 60 per cent. of moisture, 12½ of clay, and 31 of dried yeast; the third contained 62½ per cent. of moisture, 8½ of clay, and 23 of dried yeast; the fourth contained 58 per cent. of moisture, 15 of clay, and 13 of dried yeast; the fifth contained 56 per cent. of moisture, and 15 of clay, making 35 of clay and dried yeast; the sixth sample contained 61 per cent. of moisture, and 10½ of clay, making 28 per cent. of clay and dried yeast.

Homicidal Insanity.—During the past week two more prisoners charged with murder have been acquitted on this plea. One, a man named Henry Dommett, is described as of respectable position, moral, religious, and of good character, one of the best of husbands and fathers. He killed his favourite son by cutting his throat. The prisoner had been previously heard to say that he thought he was going out of his mind, and when taken into custody he said, "Saul forsook the Lord, and went to the witch and he fell." Mr. John Goode, the Surgeon of Dorchester Gaol, deposed that he had watched the prisoner. "When in the gaol he seemed very ill when he first came. He looked haggard, and was in a prostrate state; in a nervous tremor; scarcely any pulse; tongue white and flabby; and eyes very bloodshot. His manner was strange and extraordinary. He was in a state of mental confusion. The symptoms of insanity had not been so decided lately. Did not consider him in the full possession of his senses. Thought he then knew that what he did was wrong. Cross-examined: The symptoms about the eyes were most indicative of insanity. There was disorder of the brain. He had had suicidal tendencies. Did not think that at the time he committed the act he knew right from wrong. It was a case of incipient insanity, only requiring time to develope itself. He was liable to a return of mania. The balance of his mind had been gradually unhinged for some months previously. There was no acting." The other case was tried on the Western Circuit, on July 28. The prisoner was a poor woman, who had previously borne the character of an affectionate mother. She murdered her infant of three weeks old by cutting its throat. There had been insanity in her family, and she had been out of health, and had been advised by a Surgeon to wean the child. She acknowledged her crime immediately, and said she did not know why she did it. Alfred Holden, a soldier, tried at Maidstone on Wednesday, July 29, on the other hand, who murdered his infant child at Brompton, in order, as he said, that he might be hanged, and that the child might not be a burden to his wife, persisted in pleading guilty, and was accordingly sentenced to death.

Bennett *v.* Hickson. — This was an action tried at Nottingham on Wednesday, July 22, upon an agreement, the defendant denying the breach. The plaintiff is a Surgeon practising at Worksop, and he brought the action against the defendant for the breach of an agreement by which the defendant, as the executor of one Thomas Langley Beardsall, deceased, promised that he and his co-executor, William

George Beardsall, would use their best endeavours to establish the plaintiff in the business of Thomas Langley Beardsall, which the plaintiff had bought of them. The defendant's testator, Thomas Langley Beardsall, practised as a Surgeon and General Practitioner at Worksop until the latter end of December, 1858, when he died, leaving the defendant, John Hickson, who is a surveyor and land-agent at Worksop, and his own brother, William George Beardsall, who is also a General Practitioner at the same place, his executors. Both executors proved the will; but inasmuch as the chief business concerned the sale and disposal of the goodwill of the testator's business, it was considered better that William George Beardsall should not act, and that the other executor, Mr. Hickson, should alone dispose of the practice. After negotiation between the defendant and the plaintiff, it was agreed that £400 should be paid for the practice, £200 down, and £200 in yearly instalments of £100 each. The defendant was to introduce the plaintiff to the patients; the co-executor, Mr. W. G. Beardsall, who since his brother's death had been attending to the practice, representing that his own practice was of such a character that it would not interfere with Mr. Bennett's. Mr. Hickson, it was admitted, had entirely performed the agreement so far as he himself was concerned, but it was alleged that his co-executor had not used his best endeavours to establish the plaintiff in the testator's business, but, on the contrary, had injured him therein. Upon this point the case for the plaintiff divided itself into three heads:—1, that William George Beardsall had said to one Henry Smith, a grocer at Worksop, that Bennett would not remain long at Worksop because of his high charges, in consequence of which it was alleged Smith had dimissed the plaintiff, and gone to William George Beardsall; 2, that William George Beardsall had applied for and obtained the post of Medical officer to the Abbey Lodge of Odd Fellows in place of the plaintiff, who, it was alleged, was entitled to the post under the agreement as the successor of Thomas Langley Beardsall; 3, that William George Beardsall had applied for and obtained the post of Medical officer to the Abbey Sick Club. The first of these institutions consisted of from sixty to seventy members, who paid their Docter half-a-crown a-year; the second of about 220 members, who made a similar payment. The Judge, on summing up, remarked that it was admitted that Mr. Hickson had done all that was required of him, and that there was no ground of complaint whatever against him. He had, however, agreed for the acts of his co-executor as well as himself; and the plaintiff was entitled to a verdict, if the jury were of opinion that Mr. William George Beardsall had not done that which Mr. Hickson had agreed that he should do. To say of Mr. Bennett that he would soon have to leave Worksop because his charges were so high, and to become his rival for the office of Medical attendant upon the Abbey Lodge and Sick Club, could hardly be looked upon as acts that were likely to assist Mr. Bennett in establishing himself in the testator's practice. The jury found a verdict for the plaintiff, with £100 damages.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Ritchie.—The paper on the Continental Obstetric Schools will appear shortly.

C. A. B.—It is necessary that any letter intended for publication should be authenticated by the writer sending, in confidence, his name and address.

Argus.—"*The Case of Remarkably Prolonged and Profound Sleep,*" which appeared in the *British Medical Journal* for June 13, 1863, is clearly the same case that had been previously described in the *Medical Times and Gazette* for April 18, 1863, by John Ward Cousins, M.D. Lond., F.R.C.S., Surgeon to the Royal Portsmouth Hospital. It is unusual for one Practitioner to give a *replica* of a case which has been described by another.

Burnett's Disinfecting Fluid.—An anonymous letter has been written to the *Times* in which carbonate of soda is very properly recommended as an antidote for chloride of zinc. Antidotes, however, are at best uncertain; the human stomach is a more delicate apparatus than a glass mortar, and may be irretrievably injured in a few seconds. Prevention is better than cure. If the proprietors of Burnett's solution would change their bottles and labels—to which, however, they obstinately adhere, in spite of remonstrances by coroner's juries, the Medical Profession and press—we should hear of fewer fatal accidents from mistaking Burnett's solution for Dinneford's fluid magnesia.

We advise all our readers who have sense to look at an article in the *Saturday Review* of July 25, on "*Physical Education.*" The prevailing iniquities of public schools are detailed to a nicety. All the shallow humbug of the "Tom Brown" set of writers is exposed.

The pythoness, whose incubation at the Zoological Gardens last year excited a good deal of interest, died last Wednesday. On being opened she was found to contain a vast number of eggs, some as large as a hen's. Her death is attributed to her illness and long incubation last year, when she abstained from food for thirty-five weeks. She is said to have been the largest serpent of this description in Europe, and has lived in the Zoological Gardens since 1849, when she was imported from Africa. —From the *Guardian.*

A Live Sturgeon at the Zoological Gardens.—The following letter appeared in the *Times* of Thursday, the 30th ult.:—

"Sir,—Although we are well accustomed to the sight of sturgeons on the slabs of fishmongers' shops, it is not often we have an opportunity of seeing them alive. A few days since one of these fish, about three feet long, was caught in a whitebait net near the mouth of the Thames, and brought alive to Billingsgate. It was bought by Mr. Charles, fishmonger, of Pimlico, who kept it some three days in a tank, and then sent it to the Zoological-gardens, where it now is. The fish seems in good health, all but a wound which has been made by a rope just above his tail. He looks not unlike a large jack in the water, but he swims in a very different way, the lower half of his body swaying about in the water with an almost serpentine action, implying swiftness in swimming and great power to hold his own in a rapid stream. As he swims along the bottom of the water he keeps his head close to the ground, and every now and then shoots out his great toothless telescopic mouth as if in search for food. The beard-like feelers underneath his pig-shaped nose are also perpetually at work, and no doubt they are of great use to him when groping his way among the rocks several fathoms under water. Mr. Bartlett and myself have had a consultation as to what to give him to eat, for he will not touch earth worms or small fish, and we have agreed to try him with water shells of various kinds; for having lately dissected the stomachs of several sturgeons, especially one, the property of Mr. Heck, of Portman-street, which was 9 feet 2 inches long, weighed nearly 4 cwt., and contained no less than three large buckets full of caviare or roe, I have found the contents of the stomachs of sturgeons to be principally comminuted portions of shells, and occasionally sand worms. The live sturgeon is in a pond in front of the new antelope house, where he seems quite at home; he frequently comes into the shoal water at the margin of the pond, takes a great gulp of air, and retires again into the deep, while he keeps his little pig-like eye fixed with suspicion on the spectator. "Frank Buckland.

"Athenæum Club, July 29."

Messrs. Carpenter and Blackett.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Your sense of justice will, I feel sure, induce you to afford me a small space in your columns for publicly stating that I am so desirous to have the Professional behaviour during the last three years of Mr. Blackett and myself investigated by a Medical arbitration, that I will allow him to name three Durham Practitioners for this purpose. I am, &c

Carr-villa, Durham, July 25. R. H. S. Carpenter.

Army Medical Officers in India.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As by far the larger proportion of the Army Medical Department is serving in India, it may be well to call the attention of the Profession generally, and of candidates for the service especially, to the injustice under which Medical officers in that country have been labouring of late as regards leave of absence.

Four or six months can only now be obtained for the purpose of proceeding to England. Should an applicant be fortunate enough to get "leave from the date of embarkation" he would have (failing to obtain an extension at home) to rejoin his regiment or depôt within the period of the four or six months, nearly two of which would be expended in travelling from England back again to his station, if at a considerable distance from Calcutta, Madras, or Bombay, to say nothing of the enormous expense incurred in going to and fro.

Executive officers usually obtain fifteen months' furlough from the date of embarkation. I am, &c.

July 12. Army Surgeon.

Von Gräfe's Optometer.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Permit me to bring under the notice of your readers an exceedingly useful optometer (devised by Prof. von Gräfe), which I have recently received from Berlin, and which I shall be glad to show any one who takes an interest in the subject. Every one who has had anything to do with the adaptation of trial-glasses must have experienced the wearying process both the Surgeon and the patient has often to submit to before the absolutely correct glass is found which remedies the existing myopia or hypermetropia.

Indeed, in some difficult cases the physical and mental fatigue becomes such as fairly to exhaust the patience of either party. This is all in great measure obviated by Von Gräfe's optometer. It consists essentially in a Galilean telescope. In this optical instrument, as is well known, a normal eye sees distant objects distinctly, when the eye-piece and object-glass are separated by an interval, which equals the difference of their respective focal lengths. By *approximating* these two lenses, the rays which emerge from the system are rendered more and more divergent, and are thus adapted for greater and greater degrees of *myopia;* by separating the lenses, the rays, on the contrary, become more and more convergent, and are thus adapted for greater and greater degrees of *hypermetropia.* Such is the general principle of this optometer. A graduated scale enables us to read off at once the power of the glass required to remedy any given degree of myopia or hypermetropia. I have tried it on several patients with such gratifying results that enable me to recommend it very strongly as a simple and easy method of determining that which I have always hitherto found tedious, and sometimes unsatisfactory in the last degree. I am, &c.

July 29. J. Zachariah Laurence.

King's College Hospital.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have just read in your Journal for this day, with very great astonishment, a letter signed "Rusticus," complaining of the disorder and indecorum which he appears to have noticed on a single Saturday, during the operations at King's College Hospital.

I am not now a member of the Surgical Profession, having twenty years ago exchanged that Profession for another, which may be supposed truly to make me at all events not more insensible to the feelings of my fellow-creatures. By the kindness of Mr. Fergusson, and having still a sincere love for my former calling, I am repeatedly present at the operations at King's, I should say, on an average once a month, or nearly as often; and I should be greatly obliged if you would allow me to give my perfectly independent testimony to the fact that "Rusticus" has been the witness of a most unaccountable exception to the rule. I am familiar with the other great Hospitals of London, and I am certain that nowhere are operations conducted with so much quietness and propriety as at King's College Hospital. "Rusticus" does not say whether the senior Surgeon was present on the day in question, but I cannot imagine the possibility of Mr. Fergusson's tolerating for five minutes the scene described by your correspondent. I shall be astonished if the letter to which I refer does not provoke other and more important contradictions than mine. But I could not allow an Institution, already needing so much of public support, as an unendowed charity, to suffer in the esteem of the Profession or of the public, if I could say a word on its behalf. "Rusticus" should really have gone to the Hospital more than once before making the most and the worst of an exception. I am, &c. H. C.

Cavendish Club, July 25.

Army Medical Department.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—It is understood that the number of candidates for the approaching examination for Assistant-Surgeoncies in the army, is quite inadequate to supply the vacancies. This is scarcely to be wondered at, for the authorities desire to procure first-class men, and men of this stamp can hardly perceive any great inducement to enter a service which so many are found to quit. Supposing the pay to be double what it is now, the duties, etc. to be performed are not such as to meet the wishes and tastes of men of good Professional attainments, nor has the treatment lately accorded to Medical officers been such as at all to meet their approval. I question if any rate of pay would satisfy men who have to watch rifle practice day after day, and to superintend (and instruct) Hospital sergeants in branding soldiers, and who likewise are called upon to pay the expenses attending the rejection of any recruits they may have passed, and obliged to record the most trifling article of extra diet they may have given to a patient, on pain of having to pay for the same should they have failed to do so.

It is a subject of no little comment among Medical officers that—seeing that they can obtain no leave of absence—it has been stated in the House of Commons the reductions in the Department were in accordance with the requirements of the Director-General, and that he was a member of the commission which saw fit to preclude any Medical officer from sitting as president of boards of any kind. It would seem therefore that we have in a great measure to thank our own heads for a reduction in our numbers as well as in our status. The public often express themselves at a loss to appreciate the motives which actuate army Surgeons in adhering to their demands about relative rank, etc.; the fact is, that individually and personally they care for nothing of the kind. If the feelings of the Department were taken they would as gladly wear mufti as uniform, indeed, the majority of Medical officers would prefer to do so, but everything in the army turns upon rank. Your position, your allowances, and your comfort are mainly dependent upon your relative rank The authorities have chosen that it should be so regulated, and it is ridiculous to suppose that Surgeons will quietly submit to lose these advantages.

There will be Boards of Inquiry in India as to the numerous sanitary arrangements to be effected there; these inquiries will not involve questions of discipline or command at all, but upon the decision arrived at will the health and well-being of our Indian troops mainly depend.

Now, I would ask, who could be a better president of these boards than a Medical officer? How are the special acquirements of the Medical officers to be turned to account if you deprive them of all authority in such matters, as would be the case if they are merely called as witnesses on these inquiries.

The past history of the Department shows plainly enough that Surgeons may cover acres of paper with their representations without any utility; the evils complained of by them in their reports continue year after year, until a public commission drags them before the world, and then the Medical officers reap as much odium as if they had been all the while negligently and carelessly silent. I am, &c.

Nemo.

Indian Sanitary Recommendations.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having this moment read your review, with your Editorial notice, of the India Sanitary Commissioners' Report, in your Number of this date, it is but justice to myself to say the same facts, mainly, and conclusions were published, nay, reiterated, by myself more than twenty years ago, when sanitary questions were much less in favour, in the *Bombay Medical Transactions*, etc., and even in the public newspapers, the last at Madras in 1844, showing, in pounds, shillings, and pence, the advantages of having Bungalore made the grand depôt. The Commander-in-Chief, I heard (the letter was anonymous), said the writer knew nothing about it, for the troops already at Bungalore were there by sufferance, that part of the country belonging to an independent prince, which certainly was true; but I believe, notwithstanding, this suggestion has been partly adopted. I had previously shown the advantages of Poona for the Bombay Presidency, and of Aboo for the Deesa troops (a); the disadvantages, too, of the high western Ghaut stations, with their deluges of rain; that the grand secret was sufficiently to the east of these Ghauts, to where the annual amount of rain did not exceed twenty or thirty inches, yet not so far as to get into the lower or malarious districts. I had shown the disadvantages of the town barracks of Bombay amidst a dense population, and closely surrounded by narrow, dirty streets, as compared with the island of Calaba, open, much cooler, and freely exposed to the sea breeze; the comparative high rate of mortality of recruits (62 or 61 per 1000) the first year, from the marching to join their regiments chiefly, as also of the troops on field service, compared with those in cantonment, and even on a mere change of station; that in cantonment, each locality or district, too, had its own rate of mortality, irrespective of barracks, or all other considerations. In the Madras Presidency for twenty years up to 1814 (of an aggregate strength of 76,419), for instance, Secunderabad had a ratio of mortality of 71·4 per 1000, of which 11·8 was by fever, and 36·3 by dysentery (malarious) and abscess of the liver; Bungalore, 25·6, etc.; and the whole command, 39·3. Nor is there a doubt but the higher ratio of the Commissioners is from including those on extraordinary service in the field, during the wars in the Punjaub, during the mutiny, and from the immense proportion of first year's service from the vast increase of the European army. In the mutiny year there must have been 40,000 of first year's men. There is the report for the Bombay stations in the *Bombay Medical Transactions*, vol. iv., 1840, and a similar I made of the Madras for the Deputy-Inspector, but this last was by special provision (having been given free access to all official documents) not to be published by me, nor did I consider I had a right even to keep a copy. Knowledge, not action, was then the order of the day.

I am, &c.
Robert M. A. Hunter,
1st Class Staff-Surgeon, half-pay; formerly Assistant-Surgeon
2nd, or Queen's Royal Regt., and Surgeon 57th Regt.
Dollar, near Stirling, July 25. Prof. of Med. Science.

Vaccination.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Since vaccination just now has to encounter many difficulties in asserting its claims, the remarks of Dr. Godfrey, in your Number of July 18, commend themselves to all vaccinators; but I believe very few have practised his careful and methodical plan, or do now, or perhaps will ever do. There are many prejudices, we know, in the general public on this subject, and one is against the number of punctures mentioned by Dr. Godfrey; and many Medical men also believe that one puncture, followed by a properly formed and progressive vesicle, is all-sufficient, and that the constitutional affection, or vaccine incubation, has been carried on and produced concurrently with the growth and maturation of a single vesicle, and has been sufficiently established, whether that vesicle be ruptured and emptied or not, after maturation; the common opinion being that the vesicle dries and scabs. If, therefore, Dr. Godfrey's idea of absorption be correct, a vast amount of error and faulty vaccination have existed. That much want of care has been must be allowed in the wholesale vaccination necessarily practised sometimes. A host of persons, under the fright of small-pox, apply, and a place and day are fixed; an arm is found to supply the host of children brought; the work of patching arm after arm with the vaccine hurriedly goes on, and many of the children are not brought again for inspection. All this and other evils of irregularity and bad system must necessarily go on until the Vaccination Act shall be enforced, and a steady routine of vaccine set up in every parish, by which fresh and proper lymph and children will always be available to Medical men. At present it happens that not a single child in many parishes can be found under vaccination, and in a call for it application must be made to London for dry lymph, which often fails. The Registrar of Births sends out his notices, and of course knows who has complied or not. In making his return to the Union Board, could not the Board instruct their Relieving Officers, conjointly with the Registrars, to summon the careless? Something ought to be done, or vaccination will more and more lose its efficiency and character.

I am, &c. An Old Surgeon.

P.S.—It is for the Government to appoint some official means for enforcing the Act, which the Medical Profession and all concerned in sanitary progress ought to call for.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—When one writes somewhat authoritatively, as Dr. Godfrey seems to do on the subject of vaccination in your Journal of July 18, we must take heed how we call in question the soundness of the conclusions at which he has arrived. It is to be regretted that he has not adduced some proof of the assertion that an infant is not vaccinated if all the reproduced lymph is let out on the eighth day, either by accident or puncture.

The question at what period of the process the beneficial influence of vaccination is effected is a most interesting and important one. Does it take place before or after the reproduction of lymph in the vesicle? Arguing from the fact, founded on Mr. Bryce's well-known experiment, that the re-insertion of fresh lymph, in order to be efficacious, must not be postponed beyond the sixth or beginning of the seventh day, I should say that at that time the blood, as a rule, had undergone such change as to have lost its susceptibility to further impression for the time being from the vaccine virus.

With regard to the supposed absorption of reproduced lymph, it would appear from what has just been stated that we must admit one of two conclusions: either there is no absorption of lymph in its pure state from the vesicle at or about the eighth day, or at a time when it would reproduce its like in the system of a non-vaccinated child; or if there be, there is no evidence to show that the system is affected by it.

We are all agreed that the vaccine in the vesicle after the ninth day is losing its potency; and this occurs partly from its dilution with serum, the result of inflammation, but most probably chiefly from gradual decomposition. But during this time there is no evidence of its being re-absorbed; on the contrary, the vesicle is becoming fuller, and soon it may burst from over-distension, if not opened. And, therefore, if we admit that at a later period some of the fluid contents of the vesicle are absorbed, and some dry up in the scab that is formed, it is evident, with regard to the former, that absorption takes place at a stage of the process subsequent to that in which the vaccine is in a state of purity or potency, or when, as Dr. Godfrey would say, it was in a vitiated state, and, consequently, unlikely to be productive of further specific or protective influence.

There are other matters of minor importance in which my experience does not coincide with that of Dr. Godfrey, especially in regard to the direful agency of foreign blood discs, etc.; but he is to be commended for inculcating so earnestly care and cleanliness.

I am, &c. W. F. Cleveland, M.D.

P.S.—During the late epidemic of small-pox I re-vaccinated about one hundred and fifty patients, of ages ranging between six years and sixty, the majority being between fifteen and twenty-five. Of the whole number, nearly two-thirds took, as it is called; some in two places, others in one out of three. In several cases the areolar inflammation ran high, and in two especially there was much swelling from the shoulder nearly to the elbow, with purulent discharge from the vesicle, requiring for a time bread poultices With one case I had considerable anxiety; it was that of a strumous young lady, aged 13. At the end of a week she had pain in moving the arm, with tenderness and enlargement of the axillary glands. Although rest was strictly enjoined, the duty of practising a little every day was considered paramount. The swelling increased; she had restless nights, fever, with loss of appetite, etc. A large abscess formed on the axilla, which, however, discharged healthy-looking pus; and under generous diet, with quinine, and removal to the sea-side, she made a complete recovery. She was vaccinated from the same lymph as her brother and sister, in both of whom a normal vesicle was formed. In every case I took particular pains to procure fresh and healthy lymph, and, in some few cases where the first attempt failed, the second, with lymph from another source, proved successful.

(a) Both these have since been taken advantage of, I believe, as pointed out.

The Treatment of Syphilis.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—My attention having been drawn to a letter from my friend Dr. Drysdale on the treatment of syphilis by mercury in your paper, and having a somewhat extended experience in the treatment of this disease, I am induced to forward you a series of cases treated in accordance with my own views. Allow me at starting to say that I find no class of disease so difficult to treat as syphilis. I do not believe in any specific, for cases will get well under different modes of treatment; the great difficulties to contend with are relapses, for after you have cured, as you imagine, the part affected with the disease, you find it recurs in another part, *e g.*, you have a case of syphilitic psoriasis palmaris, and cure it, but in a short time your patient returns to you with syphilitic mucous tubercles on the lips, and ulcerated throat. My experience in treating syphilis is certainly contrary to that of my colleagues. I find that mercury does cure syphilis quicker and more effectually than any other medicine that I am acquainted with. In infantile syphilis I have found it most valuable; I mean the use of the mineral, not its abuse. In Edinburgh there are two modes of treating syphilis taught, one by Professor Miller, the other by Professor Syme. I am sorry to disagree with my teacher, Professor Syme, in the treatment of this disease; knowing full well that it is founded upon his own experience, I take this opportunity of incidentally alluding to the fact. I shall now cite a few cases in favour of my plan of treating the disease, and shall be very glad to hear of any plan of treating syphilis with greater success.

Case 1.—A coachman contracted syphilis four years before he came under my notice; no treatment; was told it was only an abrasion, which healed. Had bubo. He came to me with syphilitic psoriasis palmaris. I treated it with iodide of potash; cured it as I thought; had four relapses; treated each time the same way. Had iritis syph.; treated by cupping and calomel, not pushed to salivation; the psoriasis appeared again. I consulted Mr. Henry Lee about this case; he ordered him calomel vapour baths, which he took for two months; has had no return since; has been well for seven years now; has had children; no syphilitic taint.

Case 2.—A. M., aged 23, married, applied to the Farringdon Dispensary last January on account of her child having an eruption on her back; has been under treatment for a month elsewhere; no better. *Present Condition.*—A weakly baby, four months old, has wasted away very much, very pallid, suffering from syph. psoriasis and ulcerations at the anus; touched the latter with argenti nitras; ordered small doses of iodide of mercury, and an ointment composed of hyd. nit. oxydi. gr. vj., creosote gtt vj., to an ounce of lard, the latter to be rubbed over the eruption every night. In March the child was quite well, no eruption, had gained flesh; ordered it cod-liver oil. May.—Still continues well; has gone out of town. The mother of this child was suffering from syphilitic sore throat, mucous tubercles on lips, complete loss of hair; treated her with iodide of mercury; she is also quite well; no relapse up to the present time.

Case 3.—J. B., aged 30, married, one child aged six months, applied to the Dispensary in June, 1861; both mother and child suffering from syphilitic psoriasis; treated both with iodide of potash; both got well; a relapse after two months; treated them the same way; another relapse after three months; treated them with chlorate of potash. The baby was brought to me this year so very ill that I did not think it would live; snuffling very much, very pallid, quick pulse and respirations. I ordered it port wine every four hours, and small doses of iodide of mercury; it got quite well, and had no relapse since; the mother is still taking iodide of mercury, and the last time I saw her she told me the child was never in better health than at present, and that she was quite well herself, but would like to continue her medicine a little longer, for it did her so much good.

Case 4.—An officer, aged 19, contracted syphilis at Brighton; was told by a Medical man there it was only an abrasion, but, as the sore did not heal, he came up to town to consult me. He had a syphilitic sore on his glans, and an indurated gland on his left groin. As he was under orders for India, I did not put him on a mercurial plan of treament, but gave him iodide of potash, and lotio nigra, and ordered him to paint his groin with liq. iodidi. I heard from him soon after he had landed. He told me his sore was quite healed, the gland had absorbed, but that he was suffering from a very severe attack of secondary syphilis, and that he was being treated with iodide of potash; he asked me to write to him and advise him. I ordered him iodide of mercury. I heard from him last week; he told me then that he was quite well.

Case 5.—N E., aged 26, a Medical man, consulted me about himself three years ago; he was suffering from syphilitic psoriasis; he had been treated with iodide of potash, tonics, purgatives, change of air, free living, every way except by mercury, which he would not take. I advised him strongly to take calomel vapour baths, which after a great deal of persuasion he took; they quite cured him. He had been suffering from the disease off and on for five years; he contracted syphilis in Edinburgh when a student there, treated himself. The last time I heard from him he had had no return; is married; has a child; no taint.

Another Medical friend of mine, who was suffering from the same complaint as the preceding case for four years, treated it with five grains of hyd. cum cretâ every night for two months; cured; has had no return; married; one child; no taint.

In treating syphilitic rupia, iodide of potash I do not find successful, and I now use in preference iodide of mercury, with an ointment composed of 15 grains of calomel to an ounce of lard. I shall never forget the favourable result of this treatment from the following case:—

A Hospital patient of Mr. Startin's was too ill to attend at the Hospital. I used to visit him; he was suffering from rupia syp.; the only thing that gave him relief was iodide of mercury and opium; he had taken ounces of iodide of potass; he said that this drug had produced necrosis of the nasal bones, frontal and tibia, for he was pretty well till he took it, and during the period he took it he gradually got worse; he improved a great deal under the iodide of mercury and gained flesh, but he was seized with a sudden attack of bronchitis and died.

A shoemaker has been under treatment for months for an ulcer of the leg, which kept on increasing. I first treated him with iodide of potash and lotio nigra; no improvement. I then tried tonics and divers kinds of dressing; no improvement, the ulcer still increasing. Coming to the conclusion that this must be a case of rupia syp., I taxed him with having syphilis; he denied it, but said he had a bubo. I treated him with iodide of mercury and the calomel ointment; in three weeks he was able to go to work, and now he is quite well. The form of iodide of mercury I use is that of the Skin Hospital Pharmacopœia, viz., ℞ hydrargyri bichloridi, ℈j., potass iodide, ʒvj., tinct. iodini comp. ʒij., aquæ, ad. Oj. M. ʒi ointment gr. ½ hyd. bichlor. et gr. iij. tot. iodidi, and many hundreds of cases are treated there yearly without any bad effects, but with the greatest success.

These are only a few of the many cases I can cite in favour of the above mercurial treatment, but I should be very glad to hear of any kind of treatment more successful, and I would give it a fair trial.

I am, &c. R. William Dunn,
Senior Surgeon to the Farringdon Dispensary.
31, Norfolk-street, Strand, July 14.

COMMUNICATIONS have been received from—

C. R. Dallas, Esq.; Dr. T. R. Fraser; Messrs. Weiss and Son; J. Parkin, Esq.; Argus; Rev. H. Christopherson; Dr. E. Dewes; Mr. A. J. Newman; Apothecaries' Hall; Dr. R. M. A. Hunter; St. Thomas's Hospital Medical School; Dr. Charles Kidd; Army Surgeon; Dr. J. Smith; Dr. J. F. Clarke; Dr. C. G. Ritchie; J. D.; Mr. R. H. S. Carpenter; C. A. E.; Dr. W. F. Cleveland; H. Marshall; Nemo; Dr. C. Dycer; Dr. Carpenter; Mr. J. Z. Laurence; Mr. T. Smith; Dr. Ogle; Dr. Carle Heine; Mr. J. Hinton; Charing-cross Hospital Medical College; Mr. W. C. Bell; Dr. George Taylor; Mr. Henry Thompson.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 25, 1863.

BIRTHS.

Births of Boys, 994; Girls, 898; Total, 1892.
Average of 10 corresponding weeks, 1853-62, 1653·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	733	719	1452
Average of the ten years 1853-62	592·0	547·1	1139·1
Average corrected to increased population..	..	..	1253
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	7	1	11	3	3	5	34
North ..	618,210	8	7	26	2	8	8	53
Central ..	378,058	3	3	11	2	6	3	44
East	571,158	10	6	28	1	5	8	45
South ..	778,175	6	3	34	3	10	8	57
Total.. ..	2,808,989	34	20	110	11	32	32	233

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·699 in.
Mean temperature	57·3°
Highest point of thermometer	74
Lowest point of thermometer	38·7
Mean dew-point temperature	50·3
General direction of wind	S.W.
Whole amount of rain in the week	0·88 in.

APPOINTMENTS FOR THE WEEK.

August 1. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

3. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

4. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

5. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

6. *Thursday.*

Operations at St. George's, 1 p.m; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

7. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

Under the Sanction and Approval of the Medical Profession.

White's Saccharized Hydrate of

MAGNESIA.

For Infants and Females it will be found an invaluable medicine. From its agreeable and pleasant taste, it has the advantage over all other preparations of Magnesia, as the most susceptible stomach will not reject it.

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BOILEAU and BOYD, Wholesale Druggists and Manufacturing Chemists,
91, 92, and 93, Bride-street, Dublin.

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Charcoal Biscuits, Manufactured from

the purest Vegetable Carbon, affording speedy relief to persons suffering from Bile, Indigestion, Flatulency, &c. Sold only in tins, at 1s., 2s., 4s., and 8s. each, by J. L. BRAGG, Sole Manufacturer, 2, Wigmore-street, Cavendish-square, London. Wholesale Agents, Messrs. MAW and SON, Aldersgate-street, E.C. Chemists and others allowed a liberal discount. Post-office Orders made payable at the Vere-street Branch.

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Glycerine, which very simple tests

show to be impure, is being sold on the statement that it is in every respect "equal to Price's." Most Medical men prescribe "Price's Glycerine," where purity is of importance. Patients can insure it by desiring to have their glycerine in 1 lb. 8, 4, or 2 oz. bottles, with capsules over the stoppers marked "Price's Patent," Belmont, Vauxhall.

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now Perfect in Purity and Strength.

"Mr. Dinneford's Solution may fairly be taken as a type of what the preparation ought to be."—Pharmaceutical Journal, May, 1846.

This excellent remedy, in addition to its extensive sale amongst the public, is now also very largely used in DISPENSING: for which the best form is in the stone jars, (half-gallon, 5s. 6d.; gallon, 9s. 6d.,) specially adapted for the use of Medical Men and Chemists. To be had from the manufacturers.

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Blancard's Pills of Unchangeable

IODIDE OF IRON.

Recommended by the Academy of Medicine of Paris,
And authorised by the Medical Council of St. Petersburg,
Extensively tried in the Hospitals of France, Belgium, Ireland, Turkey, &c.
Favourably noticed at the Universal Exhibition of New York, 1858,
and Paris, 1855.

"Of all the modes hitherto proposed of administering iodide of iron in the pure state, I think Mr. Blancard's the best."—Chemistry applied to Therapeutics, by M. Mialhe, Deputy-Professor to the Faculty of Medicine of Paris, Pharmacien to the Emperor, 1856, p. 319.

These Pills stand now very high in the therapeutics of every country, as may be seen by the above quotations, and also by the numerous scientific articles in medical periodicals and works (a).

Being enveloped in a very thin resino-balsamic coating, they present the great advantage of not being liable to any deterioration, of having no taste, of being small, and not distressing the stomach. As they possess the properties both of iodine and iron, they are especially beneficial in chlorotic, scrofulous, tubercular, or cancerous affections, as also in leucorrhœa, amenorrhœa, anæmia, &c. &c., and they furnish the medical man with an excellent means of modifying lymphatic, feeble, and debilitated constitutions. Dose, 2 to 4 pills a day.

N.B.—Impure or altered Iodide of Iron is an unsafe remedy, and may even prove dangerous. Only such bottles as bear an electro-plated seal fixed to the lower part of the cork, and the signature of the inventor placed on a green label, are to be considered as prepared by Mr. Blancard. The public should beware of spurious imitations.

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(a) Bulletin de l'Académie de Med. 1850, page 1015; Gazette Médicale, Aug. 17, 1850; Union Médicale, Aug. 15 and 22, 1850; Gazette des Hôpitaux, March 15, 1853, and June 10, 1854; Gazette Hebdomadaire de Médecine et de Chirurgie, Aug. 31, 1855; Revue de Thérapeutique Médico-Chirurgicale, Feb. 15, 1855; Abeille Médicale, Revue Clinique; Repertoire de Chimie et de Pharmacie; Annuaire de Thérapeutique pour 1851, page 199; Orfila, Elements of Chemistry; Mialhe, Chemistry applied to Therapeutics, 1856, p. 319; Quevenne, Essay on the Physiological and Therapeutical Action of Preparations of Steel, page 97, 1854; Bricheteau, Treatise on Chronic Diseases seated in the Respiratory Organs; Soubeiran, Treatise on Pharmacy; Dorvault, Officine, &c. &c.

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Third Edition of Boudault on "Pepsine," with further Remarks by Dr. Corvisart, Physician in Ordinary to the Emperor of the French. Price 6d. Edited by W. S. SQUIRE, Ph.D., published by J. Churchill and Sons. May be had also of the Author, 277, Oxford-street, London.

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MEDICINAL AGENT.

According to the formula, and of the strength described by Dr. RICHARDSON in a Paper read before the Medical Society.

See *Medical Times and Gazette*, March 29, 1862, and other Medical Journals. Price 4s. 6d. per lb.

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SUPERPHOSPHATE of IRON and LIME. New Remedial Agents introduced to the notice of the Profession at the Meetings of the Medical Society of London, and now extensively employed by the most eminent members of the Medical Profession. The Syrup is the most eligible mode of administering these valuable Remedial Agents. Mr. GREENISH will be happy to forward a variety of cases which have been furnished to him, where its success has been most marked, and which will serve to indicate where it may be most advantageously employed.

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Also see "Microscopical Journal, July, 1862.

The instrument is constructed upon a solid principle, has coarse and fine adjustments, and a mechanical stage of great simplicity and usefulness; a concave mirror, one eye-piece, condenser for opaque objects, an object-glass which divides into 1-inch, ½-inch, and ¼-inch powers; the whole packed into a neat mahogany case, £5;

Or, with the addition of a plain mirror, second eye piece, live-box, stage forceps, and polarizing apparatus, £7.

A Binocular Arrangement with rack-and-pinion adjustment to the eye-pieces, (extra) £4 10s.

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ORIGINAL LECTURES.

◆

CLINICAL LECTURE
ON
RECURRENT FIBROID TUMOUR.

DELIVERED IN
University College Hospital.

By RICHARD QUAIN, Professor of Clinical Surgery.

[Reported by Samuel Gee, House Surgeon.]

Large Tumour, Growing Rapidly, Removed.

Case 1.—Maria C., aged 37, of good constitution, first noticed the tumour two years ago. It was then, she says, like a small pea, lying just under the skin. For some time there was little change of size, but then there was a gradual increase, and lately the increase has been rapid. No uneasiness was felt until the size became considerable. Health has been perfect throughout.

State on Admission.—On the side of the pelvis, just above the right buttock, is a globular swelling, the size of half a large cocoa-nut; projecting abruptly outwards, it is raised some inches above the surface. Skin over tumour is entire; at the middle it is thinned, dusky purple, from enlarged capillaries, and scaly. The tumour is firm and elastic; movable on subjacent parts.

The Operation.—The skin was divided to the base of the mass by three equidistant vertical incisions, and, when the three large flaps had been fully turned back, the mass was readily turned out with the fingers and the handle of the scalpel. Some condensed cellular tissue which was found, especially at one side, was freely removed. Ligamentous and membranous structures lay cleanly dissected at the bottom of the wound.

In the subsequent course of the case there was nothing at all unusual, except the occurrence of an erythematous redness around the wound. The erythema appeared on the fourth day after the operation, was attended with the formation of bullæ, and spread from the wound down the thigh, and over the left buttock and contiguous part of the abdomen, spreading in one direction and disappearing in another. The general condition of the patient was not at all affected by the cutaneous affection, nor was the wound. There was no approach to a rigor at any time. A few boils came out about the time that the erythema went off. On the twenty-second day from the operation the patient was able to get out of bed, and in another month she was discharged to go into the country.

Description of Tumour.—Shape globular; surface smooth and regular, except in one place, where two small lobules project, each about the size of a small filbert; no separation into lobules apparent on surface. Capsule: a thin, adherent, fibrous membrane certainly covers the tumour in some places. The mass cuts firmly; the colour of the cut surface is dull white; the vascularity very slight; a few red streaks are just visible; no juice escapes on pressure. The tumour consists of two kinds of tissue: i., the opaque and firm; ii., the transparent and gelatiniform, which are so arranged that the periphery of the tumour (excepting the part nearest the skin at the middle) is made up chiefly of opaque tissue, streaked here and there with the gelatiniform, whilst the middle of the tumour and the part next the skin (*i. e.*, that forming the end of the tumour before removal) are made up of gelatinous tissue, for the most part with streaks of the opaque substance. When the gelatiniform tissue is scraped, it breaks down into a thin mucus. The difference in consistence between the two kinds is particularly well marked.

Microscopical Characters:—1. Opaque portions consist of: —i., a stroma of fibres which are very delicate, and have all the characters of the fibres of ordinary areolar tissue; ii., fusiform cells, very elongated, containing each an oblong nucleus about twice the diameter of a red blood disc: these cells are very numerous; iii., a few small fat molecules.

2. Gelatiniform portions consist of, i., a few very delicate fibres, having the same characters as those of the opaque tissue, and forming a very open stroma; ii., cells, spherical, size of a white blood cell, contents clear and colourless, and a nucleus in each cell; iii., fat molecules, in some places aggregated, or even enclosed in an envelope.

Tumours Repeatedly Reproduced after Removal.

Case 2.—A female, aged 64, a monthly nurse, is moderately healthy, but subject to bronchitic attacks; and is now suffering slightly from one of these.

States that she first observed a tumour sixteen years ago. Tumours have been removed three times by different Surgeons. The first tumour weighed two pounds. The intervals between the operations and the reproduction of the disease are said by the patient to have varied from six months to three months. The disease, original and reproduced, has always been in the same place.

The condition noted on admission to the Hospital was as follows:—On the inner side of the left limb, just below the knee-joint, begins a series of five tumours, which spread for some inches down over the leg, and are separated by deep depressions. The general thickness is somewhat less than that of the closed hand. The skin over the tumours is broadly marked with the scars of the previous operations, and where it covers the middle masses it is dark-coloured from capillaries dilated and loaded with blood. All the tumours are movable on the subjacent tissues.

The glands in the groin and elsewhere are free from enlargement and tenderness,—in short, entirely natural.

It was made known by this patient's husband that he would not give his consent to amputation of the limb. He had heard that amputation would probably be considered necessary.

After a delay on account of the bronchial affection, and when the patient seemed and felt herself to be in good health, an examination was made with a view to the operation. The lungs were found to be free from disease likely to render it unadvisable; at the same time a tumour was felt low down in the abdomen, rounded, movable, and painless. It was supposed that this might be ovarian; but the patient was very stout, and this condition was a hindrance to reliable physical examination.

In the operation the tumours were found to be mixed up at the base with the muscles, penetrating between the gastrocnemius and soleus, and connected with their fibrous tissue.

For three weeks after the operation the patient was doing in every respect well; but on the twenty-second day difficulty of breathing, ushered in by a shivering fit, came on, and she died in six days after.

This was the result of the dissection:—Left lung extremely congested, and deeply stained with serosity; froths but little. Some patches of a greyish-yellow colour seen through pleura pulmonalis on both sides. These patches are found to be firm in texture, breaking down under firm pressure. Both kidneys studded with cysts. Left femoral vein contains two clots—one at its middle, elongated and firmly adherent at the upper part; the other just above the profunda branch. This clot was soft and grumous. The veins themselves are studded at intervals with slightly elevated patches of a whitish colour. Other organs present no notable change.

Tumours were found in the abdomen and the thorax. The chief mass in the abdomen lay between the umbilicus and the pubes; it was very slightly connected by a few weak adhesions posteriorly, otherwise it was wholly unconnected. Two smaller growths were in the omentum, the larger being the size of an orange. The thoracic tumour, about half the size of the abdominal one, lay in the mediastinum, and was connected with the lung and pericardium posteriorly.

Description of the Tumours of the Leg, abridged from the Report of Dr. Wilson Fox.—They are irregularly lobed, almost botryoidal. The lobes are surrounded by capsules, some thick, some thin; processes extend from capsules into interior of lobes. On section, various appearances are presented:—i., in the older and central part the substance of the tumour is opaque white, quite cerebriform in appearance, glistening; a few blood-vessels; yields no juice on pressure; fracture easy and not fibrous; ii., in the smaller lobules the cut surface is very translucent and glittering; fracture difficult and fibrous; colour from pale yellowish to pinkish; in one or two lobules dark purple mottled with whitish spots and streaks; iii., other lobes presented an intermediate form between the white cerebriform and that last described, being dirty white or greyish.

Microscopic Appearances.—1. Cerebriform portions consist of nothing but innumerable fat globules, scattered through an indistinct fibrous basis. 2. The perfectly translucent portions consist of—i, nuclei, clear and bright, generally round, but sometimes oval, imbedded in a clear, faintly-marked fibrous tissue; a cell-wall can be traced round a few only of these nuclei; the cell appears elongated, as if ending in a fibre; ii., elongated cells, separate or massed together, with distinct outline, containing a round, clear nucleus; iii., similar cells, but oval, not elongated, massed together, with only a little clear intercellular substance between them; cells faintly nebulous, contain a single clear, bright nucleus; iv., nuclei crowded together in masses, forming, with a little clear intercellular substance, nearly the whole of the structure; in other places, where they are less densely massed, a faint cell-wall may be seen. 3. Portions of intermediate character exhibit the fatty degeneration proceeding in the primary elements of the tumour, leading ultimately to the cerebriform appearance.

The cerebriform appearance might lead to the opinion that it was a medullary cancer, but the absence of any juice, and the firm nature of the smaller lobes, together with the microscopic characters, showed it to be recurrent fibroid or fibro-nucleated. The abdominal and thoracic tumours had all the characters of the older parts of the tumour of the leg, those, namely, which had partly undergone fatty degeneration.

These cases were in the Hospital nearly at the same time. They illustrate the leading facts in the history of a form of tumour not very frequently met with. One showed the rapidity of increase which is often observable; while in the other was exemplified the reproduction of the disease again and again in the same place after removal. The latter is the important characteristic from which the name "recurrent" or "recurring" has been aptly applied to this fibroid or "fibro-nucleated" growth.

In some points of its history the "recurrent fibroid tumour" resembles cancer, in hardness, namely, and in liability to being reproduced. But it is, at the same time, distinguishable from cancer by other important circumstances, thus:—

1. The matter of the recurrent fibroid tumour does not infiltrate and destroy neighbouring tissues, as every form of cancer does. You saw a short time since epithelial disease of the mouth (male cases, B. xxxiii., p. 21) blend with the muscles, the glands, and other soft parts; while under the influence of the process of deposit and ulceration which belongs to the disease, the bone itself, the lower maxilla, was thinned and broken; and the carotid artery was perforated, the patient, after a lingering decay, dying of hæmorrhage. Two other examples of the same disease are now in attendance at the Hospital. It is remarkable that those cases apply to us when the disease is far advanced in its ravages. From this, the progress of events in the fibroid tumour is very different.

2. Nor does the fibroid tumour or any morbid emanation from it travel to, or affect the lymphatic glands and the system as cancer does. You are but too familiar with the enlarged glands in the arm-pit and above the clavicle in cases of carcinoma in the mammary gland. You have lately seen cancerous disease of the testis accompanied with a large morbid mass in the abdomen—the same disease borne perhaps with the lymph to the lumbar glands, and there developed. We have had the inguinal glands affected from disease of the scrotum, and the same glands from disease at the anus. In these various instances, too, the glands became involved within a few months from the beginning of the disease. But in the cases of fibroid tumour, the history of which I have read to you, the lymphatics gave no indication of being touched by the disease, though in one of them the commencement of the malady dated back sixteen years.

I do not lay stress on the cachexia which is seen with cancer, as an aid to the diagnosis, for in truth it is very often absent even when cancer is far advanced. The presence of the cachectic condition indeed suggests the presence of cancer, but the want of it is no proof of the absence of that disease. Nevertheless, had any cancerous tumour existed and been removed and recurred as the tumour did in our second case, the patient would not have been free from evidence of a diseased system, in other words, from cachexia, as that person was. In her, after repeated returns of the tumour, the general health was fairly good and the countenance had the appearance of health. While therefore the recurrent fibroid resembles a cancerous tumour in hardness and in rapidity of growth, it differs from the same disease by not penetrating the tissues, by not being extended to the lymphatic glands or internal organs, and by not infecting the system.

Observe, however, that the circumstances which distinguish between the two tumours before their removal, are not present from the first. It is only after a time that the neighbouring structures are appreciably infiltrated with cancerous matter; it is only after a time that the material of disease is conveyed from the morbid growth to the glands. Before these changes are superadded to the original tumour, or time enough has elapsed to show that the changes are not likely to arise, it is difficult, perhaps impossible, to make the diagnosis. In our first case, in which the disease was recent, the only material facts we had for our guidance, namely, the hardness and the quick growth, were consistent with the existence of either form of disease, and the diagnosis with reasonable certainty was not possible. Nor is the distinction then very material in a practical view, since whatever its nature may afterwards prove to be, the proper course is to remove the tumour. But in the second case the diagnosis when we saw it, was already made by time, that is to say, by the long duration of the disease, and the absence of enlargement of the lymphatic glands, together with the soundness of the parts about the tumours.

After the operation, microscopical examination gives the evidence of what the future of the patient is likely to be, and in this way it is of the utmost importance to the Surgeon. In our cases that examination showed, by the absence of the peculiar cell structure of cancer, that the first patient was safe from the greatest source of apprehension; while, as regards the second, the conclusion drawn from its history was confirmed. At the same time, the positive proof of a different disease by the detection of the microscopical characteristics of the fibro-nucleated structure was added to the negation of cancer in both cases.

But it is to be borne in mind that although the fibroid tumour does not infiltrate the structures about it, does not penetrate the lymphatics, does not infect the system, and is not malignant—cancerous diseases are said to be malignant because they have that effect—we nevertheless cannot consider it a "benign" or "innocent" growth. It may become very injurious, even destructive. For, besides that the recurrence renders a new operation necessary, and exposes the patient to a renewal of the risks that attend on large Surgical operations—our second case died after the fourth operation—besides this the growth that has recurred is prone to differ from the first formed one in its connexions and in its internal characters as well. Thus the reproduced tumour is disposed to be more deeply placed, and so the difficulty of the removal and the separation of the parts to effect it—always an injurious complication—are increased. In the same (second) case the tumour was found, in the fourth operation, to have penetrated between the muscles of the calf of the leg, while the larger mass in the first case was entirely an outgrowth, not mixed up with the ligaments and muscles near it. Moreover, the reproduced disease is softer, more like cancer in appearance than the original one. In our second case it was cerebriform, and closely resembled the soft or "encephaloid" cancer.

Again, if the recurrent tumour should from any cause not be removed—for instance, the unwillingness of the patient to allow an operation, or the operation being unadvisable on account of the position of the disease, or the condition of the patient—in such circumstances the skin at length ulcerates, a fungus is perhaps pushed through, and discharges, more or less bloody, are poured out. By this state of things, or such as this, the health is undermined; and so the tumour, though not malignant, may yet become destructive. In both our cases events seemed hastening to that condition. Thus, the skin was thinned and deeply coloured; the tumours were softened in part.

Before we leave this subject, a fact out of the ordinary course requires attention, namely, the presence in one of the cases of masses of the same kind as the external tumours in the thorax and in the abdomen. These were not deposited in or connected with any of the viscera. They were not in the course of the circulation from the tumour in the leg. There was no connexion between the several tumours or any two of them by lymphatics or veins. They must all be regarded as independent growths—an example of multiple deposit. The same condition of the system or of the blood which led to the first formation of the external growths led also to the formation of the internal masses. But to the knowledge of that condition the clue remains still to be discovered.

LECTURES
ON
ECZEMA,
(INCLUDING ITS IMPETIGINOUS, LICHENOUS, AND PRURIGINOUS VARIETIES,)
DELIVERED AT THE
Dispensary for Skin Diseases, Glasgow.

By T. McCALL ANDERSON, M.D., F.F.P.S.

Physician to the Dispensary for Skin Diseases; Physician to the Deaf and Dumb Institution, etc., Glasgow.

LECTURE VI. (a)

GENTLEMEN,—It is my intention to-day, in conclusion, to take a rapid survey of the rest of the local varieties of eczema, and of the peculiar features which these present, either as regards symptomatology, diagnosis, or treatment.

Eczema of the nostrils is not very common, except when it occurs by extension of the eruption inwards from the skin in the neighbourhood of the nose. There is no itching complained of in this affection, except at the point where the mucous membrane of the nostrils takes on the cutaneous character, the mucous membrane being, as a rule, unaffected by pruritus. The nose is often much increased in size. The secretion from the nostrils is likewise much augmented, becomes thick and purulent, and concretes into crusts, so as to impair the nasal respiration and to cause the patient to sleep with the mouth open, and to snore.

On removing the crust, the mucous membrane is found to be thickened and congested, and ulcers form with considerable frequency. The patient feels the nose very much stuffed, and is thereby induced to remove the crusts which cover the ulceration. This has the effect of increasing the size of the sores, especially if the general health is not good. I know of two cases of eczema of the nostrils, however, in which the ulceration produced perforation of the cartilaginous septum, although the patients were both apparently in robust health. But I have never seen the bony septum attacked, and in neither of the above cases was there any external deformity.

The diagnosis of eczema of the nostrils from *lupus* is sometimes difficult, especially in those rare cases of eczema in which perforation of the septum occurs, for you must know that lupus not unfrequently commences its ravages by perforating the cartilaginous septum. But if the disease is lupoid, there is no itching at the orifices of the nostrils, and you will usually discover some of the characteristic papulæ of lupus on the skin of the nose or neighbourhood, which, when present, at once point to the nature of the perforation. In eczema of the nostrils, on the other hand, there is often an eczematous rash externally or the history of a past cutaneous eczema. And lastly, while eczema often occurs in strumous persons, lupus is almost always accompanied by other signs of struma, such as engorgement, or suppuration of the glands on the side of the neck, caries, etc.

Syphilitic affections of the nostrils may likewise be mistaken for eczema of these parts. But in the former there is no itching at the junction of the mucous membrane with the skin; there are often syphilitic eruptions on the skin, or other symptoms of syphilis, such as alopecia, sore-throat, glandular engorgements, rheumatic pains, etc.; there is often the history of a primary syphilitic sore; and, lastly, the affection yields to mercury.

I have very little to add with regard to treatment. Ointments containing mercury, as citrine ointment, are usually beneficial. Hebra recommends a strong solution of sulphate of zinc, which may therefere be tried in preference to solutions of potassa fusa. Others are in the habit of using nitrate of silver either in solution or in the solid form, and benefit frequently accrues therefrom. The patient must be warned most particularly not to tear away the crusts, but to soften them carefully with oil, and after they come away to smear the ulcerated surface with a mildly stimulating and alterative ointment, such as that of white precipitate diluted with three or four parts of lard.

Eczema of the external auditory passages (eczema meatus) occurs on both sides simultaneously in the majority of cases, though sometimes one ear only is attacked. In most instances the auricles are implicated, the disease commencing on the skin of these parts and gradually extending inwards. Sometimes the auricles are affected alone, and, on the other hand, the eruption is not unfrequently limited to the meatus. As the latter class of cases are more frequently brought under the notice of the aural Surgeon, the dermatologist is apt to have erroneous notions as to the frequency of the affection.

It may arise from the same causes which call forth eczema on other parts of the body, but the local causes specially operating are the introduction of pins, ear-picks, and acrid substances into the meatus. The patient sometimes complains of a feeling of fulness in the ear, but the itching is the most annoying symptom, to allay which pins or ear-picks are frequently introduced, so as to scratch the parts—the finger-nails, which are employed for a like purpose on other parts of the body being inadmissible. In this way the irritation is relieved for the moment, and the disease proportionately aggravated. The calibre of the meatus is narrowed, often so much so that the membrane of the tympanum cannot be distinctly seen, the amount of the narrowing being dependent upon the amount of infiltration of its walls. There is always exudation from the meatus at some stage of the disease, and the fluid which exudes is either milky or watery, and sometimes so excessive as almost to soak the pillow at night. If the ear is not frequently washed out, the exudation has a very bad odour. At other stages the meatus may be quite dry and scaly, and in connexion with this condition I have frequently noticed the surface of the membrane of the tympanum to be dry and scaly also. Sometimes large quantities of epithelium are thrown off from the meatus, so as to block it up, and cerumen is sometimes mixed up with the epithelial mass. The secretion from the ceruminous glands is, however, for the most part arrested in this affection. The hearing power is often not much impaired; the amount of deafness depending upon the amount of infiltration of the walls of the canal, upon the quantity of epithelium and discharge accumulated in the meatus, and upon whether the drum and mucous membrane of the cavity of the tympanum are implicated or not. Sometimes the deafness is so great that the tick is only heard when the watch is close to the ear.

The cure is often tedious, as it is impossible to apply local remedies so well to the meatus as to the skin; and strong local applications must be used with caution on account of the delicate structures at the bottom of the meatus. The ear must first be carefully syringed, so as to remove the exudation, and, when the walls of the canal, instead of exuding, are scaly, a few drops of olive oil should be previously introduced, so as to soften the particles and facilitate their subsequent removal. The relief and improvement of hearing following upon the use of the syringe is often so great as to astonish the patient who has allowed the serous exudation and particles of skin to collect in the ear for months. After all the *effete* matter has thus been removed, I frequently paint the walls of the meatus with solutions of potassa fusa (commencing usually with a solution of ten grains in an ounce of water, but the strength must be proportioned to the severity of the disease). A small paint-brush is dipped in the solution, and gently stripped, so that it does not contain too much fluid, then insinuated into the meatus for the extent of half an inch, and twisted round, so that the walls of the canal are entirely moistened by the fluid. This usually causes considerable smarting, which, however, subsides in a few minutes. If the action is very severe it may be checked at once by the injection of tepid water, for which purpose I am in the habit, previous to the operation, of filling a syringe with it, and holding it in readiness for use, if required. If a strong solution is used (*e.g.*, ʒj. to ℥j.) we must be careful not to take up so much fluid with the brush that it drops upon the drum, as the applications which are appropriate to the walls of the canal cannot always be applied with impunity to the delicate structures at the bottom of the meatus. In cases where the drum participates in the disease, as usually happens, a weak solution (*e.g.*, potassa fusa, gr. iij. to ℥j. of water) may be used as an injection night and morning, which is sufficiently strong to improve its diseased condition in most cases. A strong solution (ʒj. to ℥j. of water) may usually be painted on the walls of the meatus every two or three days, but the more severe the affection, and the weaker the application, the oftener must it be repeated. In the intervals between the applications—which I never trust to the patient if the solution is strong—I direct him to syringe out the ear twice daily with tepid water, as before mentioned. The beneficial effects of this treatment are sometimes very marked; the hearing often improves after a single application, the uneasiness in the ear subsides, the meatus becomes wider, and a large quantity of serous fluid exudes, which accounts for the improvement.

(a) These Lectures have been carefully revised, and many alterations and additions made.

The following case illustrates what I have been saying:—G. T., Esq., aged about 45, consulted me January 10, 1862, for an affection of the ears of two years' duration. He complained of tinnitus, uneasiness, and fulness in the ears, with severe itching, to allay which he was in the habit of using an ear-pick. Sometimes a profuse watery discharge, mingled with epithelial *débris*, came away from the ears; sometimes small scales only. He had latterly been troubled with deafness on the right side, the tick of the watch being heard at the distance of two inches and a quarter from the ear. An eczematous eruption was seen upon the concha, the meatus was much narrowed, red, and scaly, and the membrana tympani dull and scaly, giving it a very peculiar aspect. On the left side the same symptoms existed, though in a less marked degree, but the hearing was good. The right membrane of the tympanum was relaxed and had fallen backwards somewhat, as the hearing immediately improved on forcing air into the cavity of the tympanum, and the drum was seen to move outwards. To remove this condition I touched the drum with a solution of nitrate of silver (gr. x. to ℥j. of water), and on the 14th the relaxation was nearly gone, and the tick of the watch was heard at the distance of a foot. I now painted each meatus with a solution of potassa fusa (ʒj. to ℥j. of water) in the manner above described, after syringing out the canals thoroughly. This was repeated on the 16th, and again upon the 18th, when the tick of the watch was heard at the distance of a yard from the right ear; the hearing in the left continued good; the itching, sense of fulness, and tinnitus were gone; the meatuses were wider and more natural in appearance, and the drums not so scaly. This application was repeated a good many times, and the canals washed out with tepid water twice daily in the intervals, with the most beneficial effect.(b)

You will often find benefit accrue from the use of a solution of nitrate of silver in the proportion of half a drachm or a drachm to the ounce of water, which may be painted every day or two over the meatus in the same way as the potassa fusa solutions. As an instance of the good effects of this treatment, I may mention the case of a lady whom I saw lately in consultation with my friend Dr. J. B. Cowan. She had suffered for some time from an eczematous rash of each ear, which had extended to the meatus and membrana tympani. The eruption when I first saw it was red, infiltrated, dry, and scaly; much itching was complained of. There was likewise a sense of fulness as well as of itching in the meatus, and the drums participated in the manner before indicated in the eruption. The tick was heard when the watch was at the distance of one inch from the right ear, but was only faintly audible when pressed *firmly* against the left. It was audible, though not very distinctly, on the temples. The ears were to be washed out night and morning with warm water, and each meatus to be painted every second day with a solution of nitrate of silver (ʒss. to the ℥j. of water). The following mixture was to be rubbed firmly over the external eruption night and morning, and to be washed off with petroleum soap and water before each re-application:—

℞ Potassæ Fusæ, gr. xv.
Olei Cadini, ℥j.
Alcoholis, ℥iss.
Olei Citronellæ, ʒj. M.

This was on December 23, 1862. On January 6, 1863, the following was the report:—Tick of the watch heard at the distance of eight inches from the ear on the right side, quarter of an inch on the left. Meatus more natural in appearance. External eruption nearly gone. Apply the lotion only in the morning, and at night rub a little citrine ointment over the parts. Paint each meatus with the nitrate of silver solution once every three days only.

On January 29, 1863, the external eruption had disappeared; each meatus and drum was comparatively healthy in appearance, all uneasiness was gone, and the watch was heard ticking at the distance of more than a yard from each ear. Dr. Cowan and I now recommended a course of Fowler's solution, to prevent a relapse if possible,—the painting of each meatus only once weekly with the solution, and the use of citrine ointment externally once daily. I have not seen nor heard of this lady since, but I doubt not that she continues well.

After the infiltration of the meatus has disappeared, you will sometimes derive benefit from painting the canal daily with a little melted citrine ointment, care being taken to use the syringe and warm water before each re-application of the ointment. Leeches may sometimes be resorted to for the removal of congestion; purgatives, like leeches, produce a temporary alleviation of the complaint only; astringent injections, though useful, are inferior to solutions of nitrate of silver and potassa fusa; blisters are principally of service in calling forth a counter discharge, if the eczematous exudation is very profuse, and you fear the occurrence of bad effects from its sudden cessation, and, in severe cases, such as the one I have just related, a carefully-regulated, long-continued course of arsenic may be given with advantage.

(To be continued.)

ORIGINAL COMMUNICATIONS.

A DESCRIPTION OF THE "SELF-HOLDER,"

AN INSTRUMENT FOR SUPPORTING THE LARYNGEAL MIRROR AFTER ITS INTRODUCTION TO THE FAUCES.

By MORELL MACKENZIE, M.D. Lond.,
Physician to the Dispensary for Diseases of the Throat.

THOSE who wish to treat laryngeal disease by accurate topical applications, cannot help feeling that, though two hands may be sufficient for supplying the ordinary wants of mankind, a third is a perpetual necessity for their purposes.

In applying remedies to the larynx, the mirror has to be introduced with the left hand, in order that the right may be used in operating. Many people, however, find considerable difficulty in thus employing their two hands, especially in introducing the mirror steadily and accurately with the left. Should the operator, however, be completely ambidextrous, as both hands are engaged at the same time, he has no means of controlling the position of the patient; if the latter moves at all, the light is immediately lost, and the operator cannot make any modifications as regards the lamp without removing the mirror, or withdrawing the instrument he is using.

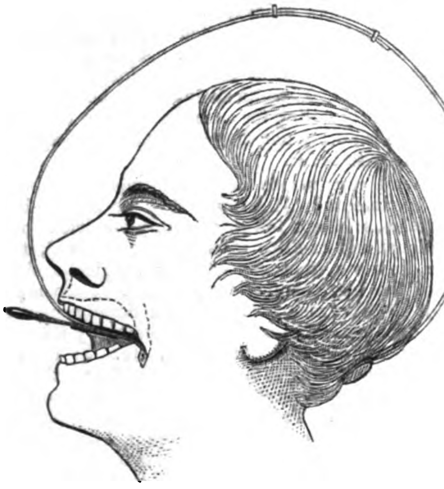
No sooner therefore did accurate diagnosis lead to an attempt at accurate topical treatment, than an instrument for holding the laryngeal mirror after its introduction was felt to be an urgent want. At an early period (a) Dr. Türck made use of a kind of artificial arm (*fixateur*), into which the stem of the laryngeal mirror could be fixed after its introduction to the fauces; this arm projected from a strong tripod resting on the ground, and he suggested that it might be screwed on to the operator's chair. This instrument only very partially answered the purpose for which it was devised, and from its size and nature, its use was necessarily confined to the specialist's consulting-room. The *fixateur* of Türck also laboured under the disadvantage of being independent of the patient's person; with it it was not possible, by moving the patient's head, to alter the position of the mirror, so as to obtain different views of the larynx, or to recover the illuminating rays, when perhaps, in consequence of a slight movement of the patient, they may not be passing directly to the mirror. This disadvantage was felt by practical men, and another kind of *fixateur* was invented. The instrument, for the priority of the invention of which a fierce contest has taken place between Drs. Lewin and Ranchfuss, consists of a species of gag made of two flat blades; the mouth is kept open by one blade pressing against the upper, and the other against the lower teeth, and at the angle of union of the blades is a screw, into which the stem of the mirror can be passed after its introduction to the fauces. So few people, however, will submit to having their mouths fixed widely open in this way, that the instrument has been very little used.

The "self-holder" which is now to be described is of the most simple construction, very easily applied by the operator, and not less easily borne by the patient; it is also extremely portable. The instrument consists of a thin plate which is put into the patient's mouth, so as to be on a level with the upper teeth; on the under surface of the plate is a slight projecting ledge, on which the stem of the mirror, after its introduction to the fauces, can easily be made to rest.

(b) See "Cases Illustrative of Diseases of the Ear." By T. McCall Anderson, M.D. No. II. *Glasgow Medical Journal*, April, 1862.

(a) "Praktische Anbeitung zur Laryngoscopie." 1860. Page 60.

The plate is kept in its place by means of a spring which passes round the head, and, through the intervention of a rather broad pad, presses just below the occipital protuberance. The manner in which the fencer's mask is kept on furnished the idea for the instrument, and an allusion to it will, perhaps, render a description of its principle more intelligible. The wood-cut shows the mirror supported in the "self-holder." (b)



The spring need not be at all strong, for very little power is required, and the patient can open and shut his mouth whilst wearing the instrument; the spring should be made in two pieces, one sliding over the other, so as to adapt itself to any sized head. In order also that the instrument may readily suit different shaped mouths, it is desirable to have a number of different plates to which the same spring can be attached. The stem of the mirror is firmly (c) retained in, but, at the same time, can be easily withdrawn from, the ledge in which it rests.

In using the self-holder, it is necessary to employ a somewhat modified laryngoscope. The mirror should form a more obtuse angle with the stem than in the instrument in common use; for whilst in ordinary laryngoscopy the stem passes from below upwards and backwards (the mirror being higher than the handle of the instrument), when fixed in the self-holder with the mouth open, the stem passes downwards and backwards, and therefore, unless the modification suggested be adopted, the mirror will only reflect the back of the tongue. It will be found convenient to have the stem very stiff for about three inches (next the handle), and tempered, so as to be less rigid for about an inch near where it is joined to the mirror. If the stem gets bent it will not rest so well in the groove of the self-holder; it is therefore necessary that the first part of the stem should be inflexible. On the other hand, in order to obtain different views of the larynx, the part of the stem next the mirror should admit of being easily bent. The self-holder is probably capable of further improvement, though the author has already employed it in applying remedies to the larynx, galvanising vocal cords, and operating on excrescences; it is hoped therefore that it may prove a useful addition to what may be called "remedial laryngoscopy."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The library will be closed from Monday, August 17, to Saturday, September 12, both days inclusive.

A SOCIETY has been formed in Bradford, Yorkshire, for the reading and discussion of papers, called the "Bradford Medico-Chirurgical Society." Two successful meetings have been held.

SOME REMARKS ABOUT DELIRIUM TREMENS.

By R. G. HARDWICK, M.D. Lond.,

Physician to the Leeds Infirmary. (a)

THE questions to which I am about more particularly to allude are:—What are the real causes of delirium tremens? Why do some patients afflicted with the disease recover? and why do some die? All this has important reference to the subject of treatment, which has been so much discussed of late.

Regarding the causes of delirium tremens, the old and long-received idea that excessive drinking is the predisposing, while the withdrawal of the stimulants is the exciting cause, is perhaps not held by many at the present day; it is indeed wonderful how such an unphilosophical and easily-controverted theory should have been so long received, especially when we remember, in the face of it, that a much larger proportion of habitual drinkers, who by circumstances become suddenly deprived of their dram, never are afflicted with the disease in question. The familiar instance of the large number of drunkards who are yearly admitted into our prisons, and thus suddenly checked in their habit, has been adduced before. Then, again, there is the gross inconsistency that delirium tremens often comes on during a debauch, the patient drinking up to the time of the attack. A later explanation has been offered, viz., that alcohol, taken habitually in small doses, is a cumulative poison. But this theory also appears to me to be opposed by a large amount of evidence. It would seem, if true, to account very readily for cases following a debauch; but it often happens that the continued introduction of the poison is suddenly cut short by disease, or, what is more to our point, by an accident. This is no uncommon occurrence, and surely it would be illogical to try to explain away these facts by supposing that the poison had just accumulated to the extent of giving rise to its effect (delirium tremens) precisely at the time the accident happened; and, moreover, that the coincidence should be repeated in all the cases of delirium tremens coming on after an accident. Then, again, out of the vast number of habitual soakers, how small a proportion pays the penalty of this disease! Is it not almost a daily occurrence to find the spirit-drinker dying from cirrhosis of the liver, granular kidney, and many other complaints that could be mentioned, in some of whom surely any cumulative poison would have produced its effect in a lifetime of indulgence? Moreover, delirium tremens is said to own mental causes of a depressing kind, such as anxiety, suspense, etc.

How, then, is delirium tremens brought about? To express myself in the usual Medical nomenclature, I believe drinking is the predisposing cause, and disease, accident, or some other circumstance, further, and generally somewhat suddenly, depressing the system, is the exciting cause. No doubt alcohol acts on the brain in these cases, whether as a poison or by giving rise to some hitherto undetected change (so-called functional disease), it is not easy to decide. But that it does create a change in the nervous system, as evinced by symptoms, is certain, for in many diseases the additional phenomena dependent on the brain and nerves plainly characterise the complaint as a peculiar modification brought about by previous habits of drinking. So most acute complaints, especially inflammation, surgical ailments, etc., are found to be modified in the drunkard's constitution, and this chiefly as regards the nervous system. The spirit-drinker's constitution being thus predisposed and depressed, a still further cause of depression, often somewhat sudden, is added, and then the symptoms set in. To use Mr. Travers's old phrase, there is "prostration with excitement." In fact, traumatic delirium, more closely than any other complaint, resembles delirium tremens, and in it the symptoms depend on depression of the system. It might be answered, that the further cause for depression is wanting in those cases where the delirium tremens comes on after a debauch. But here, at all events, there is functional disease, and often something more; the stomach may have been abused until it has become inflamed, or the liver gorged, and the bowels disordered. This was well illustrated in a patient recently under my care; he had drunk till he could drink no longer, and for a day or two before his attack his stomach immediately rejected both stimulants and food. A further examination detected marked tenderness at the epigastrium, and other symptoms pointing to inflamed stomach.

(b) This instrument is made by Mr. Krohne, 241, Whitechapel-road; it was exhibited to the Fellows of the Medico-Chirurgical Society at the conclusion of the meeting held on May 12, 1863.

(c) In the first self-holder which was made the stem was held by a spring, but this action involved a certain sliding movement at the back of the throat, which caused great irritation; it also interfered with the rapid withdrawal of the mirror, and on these grounds was abandoned in the present instrument.

(a) The substance of these remarks was embodied in a clinical lecture which I gave, in the ordinary course, on the 17th of December last. It is only fair to mention that this communication was in the printer's hands before I had seen the valuable papers by Professor Laycock in the *Edinburgh Journal.*

Why do patients suffering from delirium tremens often recover? For some time now this disease has been recognised by the Profession as one in which there is a strong natural tendency towards recovery. Probably ordinary care and attention without any physic would suffice to bring many cases round. But what relation does sleep bear to recovery? One of our leading authorities answers this question by saying, "The great remedy in delirium tremens is sleep." A more logical appreciation of the facts, however, is beginning to lead us to a different conclusion. A patient does not recover because he sleeps, but he sleeps because he is recovering. The effect was long mistaken for the cause. It is exactly the parallel of what we see in enteritis; the bowels act because they are in a great measure recovered, and it is not the action of the bowels that brings about the recovery. In fact no amount of purging will cure the complaint. Likewise in many cases of delirium tremens no amount of opium will cure it. Bearing these facts in mind, it is no wonder that one man should swear by opium, another by chloroform, a third by antimony, and a fourth by digitalis. When we are provided with a remedy that will in a large majority of instances produce sleep at once, then it will be soon enough to pin our faith to it. But most of these drugs, however fully administered, generally fail for the first few doses, and then after a time they appear to succeed. If in my experience I were to believe in the remedy that immediately preceded sleep, I should indeed be puzzled by conflicting evidence. In one case mulled wine, to the extent of a pint in two doses, had been given before the patient came under my charge, and, after an interval of twenty-four hours, opium when tried was followed by sleep. In another case opium had been given in large and repeated doses without effect, and the subcutaneous injection of half a grain of morphia seemed to act like a charm. Again, morphia injections once, twice, and thrice repeated have utterly failed. In one case tincture of digitalis in three doses (ʒx altogether) did not answer the purpose, and opium given afterwards appeared to afford relief. While in another digitalis was fully tried, then opium, and purgatives, the last remedy administered, were the precursors of sleep. I may just mention here, as the subject is much under discussion at present, that I have tried the late Mr. Jones's digitalis plan in three or four cases; in only one did it even appear to succeed, and then sleep came on some time after the third dose. Do we not see here some significance in the fact that it requires time to bring about the desired sleep, whatever else may be necessary? Yet there are a few cases where a remedy is quickly followed by sleep, even after the first dose, but these are so comparatively rare that I think it is fair to assume that the remedy happened to be given just when the favourable termination was being brought about by nature, and therefore that the sleep was at least as much an instance of *post hoc* as *propter hoc*, and perhaps, indeed, a good deal more. Stimulants used to be considered an absolutely essential part of the treatment, and the accustomed stimulant was picked out as the most suitable one, "a hair of the dog that bit them." I may here state, that for the sake of clinical instruction, I have just treated a case of delirium tremens without wine, opium, or any other reputed remedy, and with as favourable a result as ever I witnessed. The inference then is clear, that patients suffering from this complaint recover, because a favourable result is brought about by nature, still, notwithstanding, she may be directed and assisted in her efforts by the use of judicious treatment.

Lastly, why do some patients die from delirium tremens when so many recover? Pathology shows us that the habitual use of alcohol gives rise to fatty and fibroid degenerations, especially of the heart, liver, kidneys, and vessels. And here is a very evident reason for depression of the system, if all these organs are impaired in their functions. For a time, say a few attacks, the additional depression of the delirium tremens can be rallied from, there is still sufficient constitutional power. But later on things get worse. The faults in these organs almost suffice to bring the human machine to a stand, and then the additional depression of the attack is more than the system can support, so that death is the result. But, following out the views before alluded to, does the patient die for want of sleep? Assuredly not, as I believe. How many painful diseases deprive their unfortunate possessors of sleep just as thoroughly as this malady does! Yes, and for a much longer time, too, than the few days that will sometimes suffice to destroy a patient in delirium tremens. Yet these patients do not die for want of sleep. Much may be argued, too, from the way in which death is brought about. Whatever may be inferred from the cases which end by coma, death certainly does not appear to result from want of sleep when the patient sinks quickly by exhaustion or prolonged syncope. The last case that ended fatally under my care firmly impressed this upon my mind. A man was walking about, dressed, and violent at twelve o'clock, and the same afternoon at four o'clock, while sitting up in bed, his strength having been rapidly failing for an hour or two, he sank back and died. This is surely not the way we should expect death from loss of sleep to occur.

What general conclusions as to treatment can be drawn from these arguments? It is plain that we should let principles guide us, and not follow a purely empirical practice. If the additional and exciting cause can be removed, it should be. When, however, that consists in a surgical accident, as a fracture of the leg, this evidently cannot be accomplished. But often it is otherwise. The gastric derangement consequent on a debauch admits of easy remedy, by alkalies and hydrocyanic acid, alkaline purgatives, etc. So also, if the bowels are very confined, with a yellowish fur on the tongue, and evidence of a congested liver is present, much may be done by free purging. To say the least, these remedies often seem necessary to prepare the way for opium. I remember, three or four years ago, learning a valuable lesson from a patient I had treated in several former attacks of delirium tremens. At one time recovery had been brought about while morphia had been used; at another, digitalis, and so on; but in this respect all his attacks agreed—viz., that he remained under treatment two or three days before relief was obtained. In the particular instance to which I allude, digitalis had been first tried (the three doses), and then opium very freely, and yet the case lingered on without improvement. The man was constantly smacking his lips, and complaining of a horrid taste in his mouth. His bowels were rather confined, so I took the hint, purged him well, and as soon as his bowels had acted he slept freely, and awoke with a good appetite. We need not on this account discard opium, for a long experience has taught us that it brings rest and quiet to a depressed and excitable nervous system more readily than any other drug. Still we should use it here, as in any other case, with the object of quieting the excitable brain, and not push it absurdly, under the idea of producing a cure, which rightly we should look to Nature to supply. When the stomach has been palpably deranged, the opium may be best employed by means of subcutaneous injections, this being one of the marked advantages that the "hypodermic plan" possesses. It is very probable that antimony affords relief by its effect on the mucous membrane, and by acting on the secretions. Digitalis may perhaps assist us by virtue of its supposed tonic properties, as has been recently suggested; still I believe a more extended experience will prove it to be of little value. Stimulants, like opium, must not be given in a routine manner, but merely, as in other diseases, to support the failing powers if necessary.

Leeds, January 20.

THE LATE SIR BENJAMIN BRODIE, BART.—The Council of the Royal College of Surgeons having commissioned Mr. Weekes, R.A., to execute a bust of the above distinguished Surgeon, that gentleman has succeeded in producing a truly excellent likeness of the deceased, notwithstanding the difficulty of working only from a cast, and from photographic portraits. The following busts now adorn the College, and are from the studios of Flaxman, Chantry, Behnes, Weekes, Turnerelli, Hollings, etc., viz., John Hunter, Bell, Blizard, Dalrymple, Home, Abernethy, Cooper (Samuel), Pott, Sir Astley Cooper, Cline, Cheselden, Travers, etc. The painting of John Hunter, justly considered the *chef d'œuvre* of Reynolds, is now undergoing the process of cleaning and restoring by Mr. Farrer, who is fully sensible of the value of the work entrusted to him, and entertains great hopes of being able to satisfy the Council, who have placed so much confidence in his well-known skill.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

ST. BARTHOLOMEW'S HOSPITAL.

LARGE BLOOD SWELLING OVER AND ABOUT THE TROCHANTER OF THE RIGHT THIGH, ANOTHER SMALLER ONE JUST ABOVE THE GREATER ISCHIATIC NOTCH COMMUNICATING WITH IT.

(Under the care of Mr. PAGET.)

[Reported by Mr. C. G. Griffin.]

William B., aged 35. He was run over by a cart two years ago, and the wheel passed close to the great trochanter. About six weeks after the injury the two swellings simultaneously made their appearance, and rapidly reached their present size. The larger one is about the size of a pint slop-basin, the smaller one a little larger than a hen's egg. On pressing the larger swelling, fluid is felt to pass into the smaller, and fluctuation can be felt in both. The swellings are tense to the touch, so that the man feared that they were solid tumours. The skin over the swellings appears healthy, not red, or adherent to the swelling. The general health is undisturbed.

He is free from pain, of robust country appearance with red cheeks, and can walk and carry a load on his back as well as he could before. No particular tenderness is felt along the spine, hip-joint, or the innominate bones, though on being much questioned he admits a little tenderness only over the sacro-iliac articulation close to the smaller swelling. No difference in the length of the legs could be seen. Iodide of iron and cod-liver oil were prescribed.

April 21.—On puncturing the larger swelling with a small trochar about twelve ounces of blood were drawn off. The blood under the microscope appeared nearly natural at first sight, but on closer examination some of the red corpuscles were seen to be nodulated and angular, and smaller than natural, others were still smaller, and spherical. The wound was closed with a pad of lint secured by adhesive plaster, air being carefully excluded by pressure upon the swelling until the opening was closed.

22nd.—He has passed a restless night, but says he is, on the whole, better. The swellings are comparatively lax, but look nearly as large as before. They feel a little uneasy.

24th.—The blood drawn on the 21st has not coagulated. The man's health is still good, as it has been all along. A fresh puncture was made to-day into the larger swelling, and four ounces of blood drawn off, and the wound closed as before. In this blood the small spherical corpuscles were more conspicuous than in the blood first examined. The man says he perspires at night.

25th.—He is a little uneasy, but not actually in pain. He is thirsty; his pulse is 65, full, and rather firm, but not hard. His general health continues good.

28th.—A fresh puncture with a small trochar was made, and ten ounces of blood drawn off. Under the microscope it appeared nearly normal at first sight. The red cells cohered in rouleaux every here and there, and were for the most part clearly biconcave and flattened, as was easily seen by making them roll over. And on comparing them with another specimen of blood, the cells were about the same size. Other red corpuscles were smaller, indented, and tuberculated, and others were still smaller and apparently spherical. The smallest could not be easily recognised as blood-cells with a power of 200 diameters, though they could plainly at 350 diameters.

29th.—The swellings are much reduced in size and soft, and their opposed surfaces can be pressed into contact. His health continues good. He feels an uneasy sensation as if the swellings were contracting and drawing the surrounding parts together.

May 4.—The swellings are about the same size as on April 29, but are more tense. He has still the uneasy sensation of pulling upon the surrounding parts. His health continues good. He is tired of lying in bed, and wants to get up. The swellings seem to be refilling.

5th.—A fresh puncture of the larger swelling was made to-day, and nine ounces of blood drawn off, making in all thirty-five ounces withdrawn. The red blood corpuscles, as in the last specimen, showed a great tendency to run together in rouleaux, and were for the most part distinctly flattened and biconcave, and appeared normal in size on comparing them with the blood of another person; but some of them were a great deal smaller than the others, and were nearly spherical, while others were a little larger than these last, and indented at the edges. The proportion of white cells to the red appears to be nearly normal. Each of the punctures was made in a fresh place, and they all speedily healed without giving any trouble.

8th.—He continues in good health. Both swellings still fluctuate, but the larger one is lax and flat; the smaller one more globular. The fluid cannot be pressed out of the smaller swelling into the larger, and one does not fluctuate on pressing the other, as at first. A fresh puncture was made into the larger swelling, and about one ounce of blood drawn off. Under the microscope this blood appeared similar to the last two specimens, except that the cells did not cohere in rouleaux to quite the same extent. The small cells were perceptibly darker in colour than the large; some of the smaller were concave on one surface, and some of the large were indented at the edges. The specific gravity of a mixture of this blood with some of that drawn the last time the swelling was punctured is 1019, that of blood being 1050 to 1059, and of serum, 1025 to 1030. The specific gravity of the first or second quantity was 1024.

9th.—He was sick last night, but attributes it to the cod-liver oil he is taking. Otherwise he continues in good health and free from pain. Pulse 70, quiet; tongue clean. He exhales an acid odour of perspiration. Both swellings still contain fluid, but are lax.

11th.—He complains of pain in the right groin and flank, and also when he passes water, and says he has gravel. The urine is scanty, very turbid with lithates, specific gravity 1027, and contains oxalate of lime in abundant large octohedra, with a few dumb-bells, and a number of grains of sand, easily visible to the naked eye, and apparently composed of aggregations of crystals of oxalate of lime.

12th.—He is still in good health, and the pain in the groin is nearly gone, and the urine more copious and nearly clear.

22nd.—The traumatic hæmatocele was punctured again to-day, having become tense, though the lesser swelling was gone, its contents having been forced into the larger by pressure. Seven and a-half ounces of bloody fluid, specific gravity 1019, were drawn off. The microscopic characters were the same as before. His health continues good, and he has a slight drawing sensation round the part, as before.

29th.—The tumour was again punctured, and about two ounces of bloody fluid drawn off.

June 2.—About four ounces of fluid were drawn off, and, in the evening, the swelling was subjected to pressure by means of a piece of sheet-lead laid over it, and bent to the shape, and then, after cotton-wool had been put under it, the lead was secured by two straps of soap-plaster and a bandage, the folds of which were secured by several pins.

9th.—To-day the larger swelling appeared empty, but the smaller one had re-appeared, and was rather prominent, the fluid having probably been pressed into it by the pressure of the lead and bandages; and it was rather prominent. It was accordingly punctured, and about five ounces of bloody fluid removed. The puncture was closed with a pad of lint, fixed by straps of plaster, as before. The chief part of the fluid seemed to come from the thickened cellular tissue between the two swellings.

10th.—A gutta percha splint was applied to-day, and fixed by a bandage. A thick pad of cotton-wool was placed over the smaller swelling yesterday. To-day there is fluid between the sites of the two swellings. The general health continues good.

16th.—The smaller tumour had again become rather prominent, and was accordingly punctured, and about an ounce of bloody fluid was obtained from it. The microscopic appearance of this fluid was the same as of the previous quantities drawn. The puncture was closed as before, and the gutta percha splint re-applied. The blood flowed from the puncture faster on firmly pressing where the larger swelling had been.

17th.—The man complains of uneasiness in the site of the larger tumour just above the greater trochanter, and attributes it to the pressure used to squeeze out the fluid. Fluctuation can be felt in the part that is uneasy, though none had been felt there before, since about June 4. It is, however, perhaps due to the pressure of the gutta percha splint over the pad used to close the puncture, preventing the fluid collecting in the smaller swelling. The man had applied the splint himself on that occasion.

18th.—He has had a shivering fit, which lasted about half an hour, and was attended, he says, with difficulty of breathing and throbbing in the smaller tumour. No fluid can be felt, however, in the larger, and only a little in the smaller swelling, and there is not much tenderness except over the great trochanter, which had been roughly pressed, and perhaps a bruise produced, on the 16th. The patient felt comfortable again at 4·30 p.m., though he was perspiring freely.

19th.—He continues rather feverish. The smaller swelling is filled out, and part of the space between it and the larger one to the extent of about three inches. There is also some swelling about the trochanter where he was bruised on the 16th. He is ordered to leave off the cod-liver oil and iron, (syr. ferr. iod., ʒj., ol. morrh., ʒj.,) which he has hitherto been taking, and to take instead, haust. amm. acet. c. tinct. camph., ʒj., 4tis horis, and pil hyd. chlor. c. jalapa, gr. x., hac nocte. The gutta percha splint is discontinued, and instead of it a piece of lint wet with lead lotion is put over the swellings.

22nd.—He continues rather feverish, and says the medicine acted too much. The swellings are both tender, so that he can scarcely move the leg. He complains also of pain in the groin. His urine is scanty, sp. gr. 1025, and turbid, with a copious sediment of lithates, and contains a little lithic acid gravel. He is ordered to leave off the haust. amm. acet. c. tinct. camph., ʒj., and to take instead, haust. amm. acet. c. potass. bicarb., gr. xx., 4tis horis. He says the smaller swelling feels as if it would burst.

About a week after this he left the Hospital, having been anxious to do so for some time. At the time of leaving he was in good health, and the larger swelling had entirely disappeared, and the smaller one was very nearly gone.

MIDDLESEX HOSPITAL.

GANGRENE OF THE RIGHT LEG—AMPUTATION —DEATH FIFTY-ONE HOURS AFTERWARDS—LARGE FIBROUS TUMOUR OF THE UTERUS COMPRESSING THE ILIAC VESSELS—OLD DISINTEGRATING CLOT IN THE LEFT AURICLE—(EMBOLIC) OBSTRUCTION OF THE ABDOMINAL AORTA AND ILIAC ARTERIES WITH COAGULUM.

(Case under the care of Mr. HULKE.)

A sallow, dark-complexioned woman, aged 55, was admitted into Bird Ward in the afternoon of April 1, 1863, with moist gangrene of the right leg, which terminated abruptly by a distinct line at the knee. For a short distance above this, particularly in the ham, the tissues were œdematous, and the skin had a slight dusky, purplish tint, from stagnation of the capillary circulation. Severe pain was complained of in the toes. The lower part of the belly contained a solid oval tumour lying across the middle line, and reaching nearly as high as the umbilicus. Both in front of it, and in the flanks percussion elicited a clear sound. The liver was not enlarged; the urine was free from albumen; there was no œdema of the left thigh or labia. The heart acted very irregularly—four or five beats, then an intermission, then a double beat—so that the pulse could not be accurately counted; it was estimated at 120; no bruit indicating valvular disease was noticed. Her general condition was one of great depression.

She stated that since childhood, when her left leg was amputated for white swelling, she had never had any grave illness till last Christmas, when, not feeling well, and discovering the tumour in her belly, she underwent a course of treatment for a supposed abdominal dropsy. After pursuing this for a fortnight, in the middle of January a bleb appeared on the instep, which was followed shortly by a discoloration, that gradually crept up the leg.

Her temperate habits, apparent freedom from organic heart disease (so far as the absence of abnormal bruit was of value, —her great depression sufficiently accounted for the heart's irregular action), and from disease of the kidneys; in short, her previous good health (for no weight could be attached to the history of an abdominal dropsy, for which the tumour, apparently a fibrous tumour of the uterus, had been mistaken), made it improbable that the gangrene had a constitutional origin; whilst the suddenness of its occurrence strongly pointed to a local origin, and this, Mr. Hulke thought, might be the compression of the right common iliac vessels, by the uterine tumour, and their consequent obstruction with coagula. The removal of the putrid limb was the patient's only chance, though but a slight one.

On the day following her admission amputation was done in the lower third of the thigh. There was little bleeding, the main vessels being plugged with coagula. At ten o'clock the same evening the operation did not seem to have added to the patient's depression. Pulse 100. She was sleeping, and had taken beef-tea with a tablespoonful of brandy every hour. Next day the stump had shrunken much, there had been a free oozing of serum from it, and there was a want of action, but no appearance of an extension of the gangrene. She continued to take nourishment. Towards evening restlessness and sickness came on, the pulse rose to 120, and she died on the evening of the second day.

At the examination of the body a large fibroid tumour of the uterus was found, consisting of several lesser and two principal masses. Of these larger masses, one was connected with the back of the body of the uterus; it filled the pelvis, flattening the rectum and bladder. The other sprang from the fundus uteri; it measured more than seven inches in diameter, and lay upon the promontory of the sacrum and lower lumbar vertebræ, over the aorta and vena cava. The aorta for two inches above its bifurcation, the common, the internal, and the external iliac arteries for half their lengths, were plugged with solid coagula, which were prolonged in a tapering form into the distal halves of the last-named vessels, nearly as far as Poupart's ligament. The oldest oagula were those in the internal and common ili ac arteries and in the aorta. The distal halves of the external iliac arteries, which were incompletely filled with coagulum, were fully one-third smaller in diameter than the proximal halves, which were completely plugged. The superficial femoral artery for two inches above where it had been divided in the amputation was plugged with a fibrinous clot, above which this and the common femoral artery were pervious, containing only scattered linear clots. Their calibre was diminished. The vein was plugged for the same distance from the face of the stump as the artery; above the clot it was distended with black, treacly, fluid blood. The external, internal, and common iliac veins, and the vena cava inferior were empty and collapsed. Many of the tissues of the thigh were œdematous; small vessels were plugged, and an examination of the limb showed that the popliteal artery and vein were plugged as far as their division, beyond which the disorganised state of the tissues prevented their being traced. The ureters and pelves of the kidneys were dilated, evidently from the uterine tumour damming back the urine. The lungs were œdematous, their anterior and lower borders were emphysematous, and their apices bore puckered scars. The heart was large and flaccid; its right side and the left ventricle contained yellow jelly-like fibrinous clots, but the appendix of the left auricle enclosed an old clot, which adhered firmly to its walls. The exposed surface of this clot was cheesy, friable, and rough, whilst its interior was broken down and pulpy.

Although direct proof was wanting, for no distinct and separate emboli were distinguishable in the coagula contained in the aorta and iliac arteries, it is likely that the infarction of these arteries began by the interception of portions detached from the disintegrating clot in the heart, at those points where the arteries were narrowed by the pressure of the uterine tumour.

HOSPITAL FOR SICK CHILDREN.

CHOREA IN CONNEXION WITH HEART DISEASE—CLINICAL REMARKS.

(Cases under the care of Dr. HILLIER.)

Chorea, extremely Severe, Causing Entire Loss of Speech and Great Difficulty of Swallowing, lasting in all nearly Four Months, followed by a Second Attack in about Three Months.

M. P., aged 10, a delicate girl, thin, with light hair and grey eyes, came to the Hospital for Sick Children on August 19, 1861.

Her mother once had rheumatic fever, and suffers frequently from rheumatism.

About nine weeks before admission her mother observed an unsteadiness in her gait, and in the movement of her hands; she was very restless at night, and did not sleep much. These symptoms gradually increased; the irregular movements affected the right more than the left arm. Her appetite, which had been very bad, became much better. At the end of three weeks from the commencement of the attack there was almost complete loss of power in her right arm. There was some difficulty in swallowing fluids. From the first her speech was much affected, and about a month ago she lost all power of articulation. She had lost flesh much, and her muscular power had greatly decreased.

On admission, her expression was rather silly. Some pale lividity of face; mouth open; tongue hanging out, slightly diverging towards the right. Rolling of the eyes and convulsive working of the angles of mouth, more on the right than the left side. Irregular movement of arms, right more than left. Is unable to raise her right arm from the bed. Jerking movements of legs, which prevent her standing. She cannot even sit up in bed. Entire loss of speech; she cannot make any approach to an articulate sound; great difficulty in getting food, chiefly from the irregular action of the tongue. Appetite good; bowels confined. Heart free from murmur; slight reduplication of second sound at second left cartilage. ℞ Vin. ferri., decoct. aloes co., āā ʒij. ter. die.

September 2.—Slightly improved. Still very thin and pale. Temperature of axilla 98·2°. Muscles flabby; expression silly; readily made to laugh. Slight rolling of head; constant movements of mouth; and frequent protrusion of tongue, and action of nares. Constant movement of fingers of both hands, and of toes and feet. Right arm and right leg less under control than left. Can now sit up in bed or walk, though very unsteadily. Still unable to speak. When told to put out her tongue evidently tries to do so, and after a time protrudes it very suddenly, and instantly withdraws it again. Mastication very imperfectly performed, the morsel being sometimes jerked out of her mouth; it is a long time before she swallows it. Swallows liquids very imperfectly, better when lying than when sitting. Respiration is very irregular in depth and rhythm. Heart's action irregular, but without murmur.

7th.—Temperature of axilla 97·4°; slightly better; pulse 68, very weak; respirations 14, very irregular; cannot speak yet; deglutition imperfect; when made to walk all her choreic movements are exaggerated. Right side of body generally weaker than left.

16th.—Ol. morrhuæ, ʒj. ter. die with the other mixture.

18th.—Considerably improved. Has gained flesh; can protrude the tongue better; can now pronounce words, though rather indistinctly; feeds herself easily; can walk better than she could, though this effort still makes all the irregular movements worse; her look is much more intelligent.

30th.—Still improving; heart sounds free from murmur.

October 1.—Liq. arsen. ♏iij. ex aqua ter. die.

11th.—Is decidedly better as regards chorea; to-day is, however, sick, and bowels rather loose, fauces pale, and tonsils swollen. Omit mixture.

12th.—Is now well again as regards sickness and diarrhœa.

17th.—To resume ol. morrhuæ, ʒj. ter. die.

21st.—Her choreic movements now are very slight; tongue white and broad; has two or three herpetic spots about mouth and chin.

November 5.—Chorea quite gone. Much stronger, able to talk well, feed herself, and walk about as another child.

Sent to the Convalescent Institution at Mitcham. When she had been there for a short time she broke her arm. This did not cause any return of the choreic symptoms. When the bone had well united she was again sent to Mitcham, where she remained for two or three weeks; and on coming back to town there was some slight return of the chorea, for which she was retained in Hospital.

Second Attack of Chorea Occurring whilst in a Convalescent Establishment—Getting worse whilst Under Treatment—Intercurrent Diphtheria Proving Fatal in Four Days—False Membrane having Extended from Fauces to the Lower End of Trachea—Pericardium Partially Adherent—Slight Disease of Mitral and Tricuspid Valves Discovered—Post-Mortem.

The date of her second admission to the Hospital was February 9.

At this time she could not dress or feed herself; there was very frequent irregular action of the arms, legs, and muscles of the face. Instead of walking she would give a kind of jumping start, then pause abruptly, and a few more steps were taken with quick, irregular motion. Speech was again indistinct. Expression rather silly; but she had a pleasant intelligent smile. No cardiac murmur audible.

February 10.—A distinct systolic murmur was heard over the apex of her heart with nearly every beat.

11th.—Cardiac murmur is no longer audible. It was not heard again during the rest of her life, though her heart was frequently ausculted. ℞ Extract. belladonnæ, gr. $\frac{1}{8}$; aquæ ʒij. ter. die. Meat diet. Porter Oss. daily.

13th.—No improvement. Adde misturæ zinci sulphatis, gr. ij.

17th.—Rather worse. Omit medicamenta. To have hot air bath every night. ℞. Vin. antim., ♏v.; liq. ammon. acet., ʒss.; syrupi, ʒss.; aquæ, ʒj. ter. die.

24th.—No improvement has followed the diaphoretic treatment. Patient looks thinner. Power of speech almost entirely lost, and the difficulty of getting food is greater from its being protruded by the tongue when placed in the mouth. The nurse, however, by spending a long time over her meals, perseveres in giving her plenty of nourishing food; her appetite is tolerably good. To omit mixture and baths. ℞ Vin. ferri, ʒij., and ol. morrhuæ, ʒj. ter. die.

March 3.—No improvement; bowels costive. ℞. Decoct. aloes, ℥ss. alt. mane.

6th.—To have her meat pounded. Adde decoct. aloes magn. sulphatis, ʒj. The tonsils were observed to be pale and large; slight pain in throat complained of. A solution of nitrate of silver (four grains to the ounce) applied to the fauces.

10th.—Throat improved. Chorea as before. Bowels still costive. To take the aloes draught every morning. To have a warm bath, containing four ounces of sulphuret of potassium, every night.

12th.—Baths to be discontinued, as they appear to cause much prostration. Omit steel wine and purgatives, and have liq. arsenicalis, ♏ iij.; aquæ carui, ʒij. ter. die post cibum.

14th.—To have one grain of quinine added to her mixture.

17th.—No improvement. Bowels costive. To return to aloes and Epsom salts every other morning.

20th.—Omit the medicamenta. ℞ Vin. ferri, ʒij.; strychniæ, gr. $\frac{1}{32}$; ter. die.

27th.—Ange dosem strychniæ, ad. gr. $\frac{1}{24}$.

On March 24 and 27 all the urine passed by her in twenty-four hours was saved, and tested. This was found on the 24th to measure 345 cubic centimetres, or twelve ounces, with a specific gravity of 1029, to be free from albumen, and by Liebig's volumetric process it gave indication of 15·87 grammes, or about 245 grains of urea in the whole amount. On the 27th the urine amounted to 450 cubic centimetres, or about sixteen fluid ounces, with a specific gravity of 1018, and 16·33 grammes, or 252 grains of urea. Now, as her weight was about forty-one pounds, or 18·6 kilogrammes, it would appear that on the average of these two days she was excreting for each kilogramme of her weight about 0·865 gramme of urea, or six and a-half grains to each pound of her weight. This is a quantity considerably above the normal amount at her age.

30th.—She complained of slight sore throat. On examination fauces were a little red, and tonsils large.

31st.—A large patch of false membrane, extending over the whole surface of right tonsil, of a dirty yellowish white colour. A lymphatic gland near the right angle of lower jaw swollen and slightly tender; some pain in swallowing; pulse weak; it is difficult to determine its frequency, but is about 88 in the minute. Strong hydrochloric acid applied by a camel's-hair brush to the right tonsil on and around the deposit. Omitte alia medicamenta. ℞ Pot. chlor., ʒj.; tinct. cinchonæ, tinct. guaiaci. co. āā, ʒij.; mellis, ℥ss.; aquæ ad, ℥iv.; ft. mistura; cujus sum., ʒij.; 2nda quaque hora. To have six ounces of wine, beef-tea, and eggs.

April 1.—Passed a restless night. The deposit has extended to left tonsil, uvula, and back of the pharynx. Choreic movements are less marked; child looks thinner and pale; pain in throat less; takes nourishment badly. The throat painted with equal parts of hydrochloric acid and honey.

2nd.—Deposit is thicker, and has somewhat extended; choreic movements less marked, and speech more distinct; glands at both angles of the jaw swollen; pulse 120, small and feeble; no laryngeal or tracheal breathing; during sleep snores loudly, and keeps mouth open; heart's sounds healthy.

3rd.—Some thin discharge from nares; has been sick several times in the night; bowels open twice. Skin to-day is hotter, dry; no albumen in urine; pulse 120, feeble. No laboured action in breathing, or any sign of obstruction, except mucous rattling at the back of fauces sometimes heard; choreic movements less, except when excited. Omit the guaiacum mixture. To have half an ounce of brandy every two hours.

4th.—Difficulty of swallowing increased. Some brandy-and-water has passed back through the nose; bowels open three times; has had a very restless night, not having been able to lie down, and only dozing for a few minutes. Several times during the night she struggled violently for her breath, and looked as if she would be suffocated. Her aspect is now much worse; countenance rather dusky. Inspiration has occasionally a slightly tracheal sound; now and then inspiration is laboured; pulse 132, very feeble. Has had an enema of brandy (℥ss.) and beef-tea (℥jss.), which is to be repeated every hour. She gradually became weaker and more livid, without any manifest struggling for breath, and died at 7.30 p.m.

On *post-mortem examination* there were found to be some slight organised adhesions in upper part of right pleura; also some old adhesions in the pericardium, stringy, from one-sixth to a quarter of an inch long, confined mainly to the posterior and exterior aspects of the ventricles; near the base adhesions existed both anteriorly and posteriorly, and were shorter, so that the layers of pericardium were closely agglutinated. The pericardium generally was pale. The walls of right ventricle were thin and flabby; some granular clot interlaced in the meshes of the tricuspid valve. There were a few small warty vegetations on the auricular aspect of the tricuspid and the mitral valves, quite smooth and firmly attached. They were about the size of very small pins' heads. There was a good deal of ecchymosis on the endocardial surface of the musculi papillares of left ventricle, and several ecchymosed spots of the size of hemp seeds beneath the pericardium, near the base of the right ventricle. Slight atheromatous deposit in aorta above the free margins of the valve. Weight of heart five and a-half ounces. In the throat a false membrane was found extending down from uvula, tonsils, epiglottis into the larynx, and coating the trachea with a distinct false membrane down to its bifurcation. The mucous membrane of trachea, near its lower portion, and of the main bronchi, was most vividly injected. There was also a little granular lymph in the right bronchus. The false membrane extended in the pharynx to opposite the upper margin of thyroid cartilage. There was a flake of false membrane loosely attached to the wall of the œsophagus, which was not at all injected. The right lung presented on section a quantity of bloody serosity, oozing from a bright red surface, here and there studded with points of a dark purple tint. These spots look almost like minute apoplexies, but, on compressing the lung, dark venous blood exudes from them, and their colour then is similar to that of the rest of lung. There were several spots of subpleural ecchymoses on both lungs. Kidneys presented a good deal of bright ramiform injection on the surface. On section there was not a very well defined boundary between the cortical and medullary portions. Under the microscope some of the tubes were found to contain epithelium, which was rather too granular. Brain appeared healthy, but rather congested; other organs were normal. The bladder contained about an ounce of urine highly charged with albumen. There was no albumen in the urine the day before death.

Clinical Remarks by Dr. Hillier.—This case presents several features of interest: the great obstinacy and severity of the chorea, coming on without any obvious cause, and disappearing after a stay of nearly four months in the Hospital, and the use of tonics of different descriptions, are worthy of note. The occurrence of a broken arm without inducing an immediate relapse, which, however, took place after the fracture had united, and whilst she was enjoying the benefits of a convalescent establishment in the country, may also be mentioned. The second attack of chorea developed itself very gradually, and became more and more intense, whilst under treatment, which was chiefly of a tonic kind, diaphoretics being substituted for one week, but discontinued on account of her increasing debility. The intercurrence of diphtheria which proved fatal in four days, having extended from the tonsils to the bifurcation of the trachea with but few symptoms beyond slight pain in swallowing, increasing debility, a diminution of the choreic movements, with paroxysmal dyspnœa during the last twenty-four hours of life, gives the case a painful interest. There had been no case of diphtheria in this part of the Hospital for several weeks. Patients with large tonsils seem to be more prone to intercurrent diphtheria than others. It was not at all expected that we should find a partially adherent pericardium with signs of old endocarditis on the tricuspid and mitral valves. There was audible, only for one day, a systolic murmur at the apex. This circumstance is important in reference to the relationship of chorea and heart disease, and confirmatory of remarks recently published in this Journal by Dr. Kirkes. I believe it is a very common thing in children to have a disease of a rheumatic nature attack the peri- and endocardial sufaces, with little or no joint affection. Of the six cases reported by me in this Journal for April 12, 1862, there was a cardiac murmur in four, and none in two cases. In the first instance, there was undoubted organic disease of the heart; in the second there was no murmur at first, but an endocardial murmur made its appearance during an attack of rheumatism; this probably was due to endocarditis, and not of dynamic origin. In the third case no note was taken as to the persistence or disappearance of the murmur. In the fourth case with a loud, and, at times, musical murmur, this abnormal state had persisted three months since recovery from the chorea, so that I have no doubt there was some organic lesion causing the murmur. In the case last reported, though a murmur was only once detected, yet there was found at the post-mortem distinct old disease of the mitral and tricuspid valves, and of the pericardium.

The most obstinate cases of chorea are those in which there is some organic mischief about the heart. Whether irregular or choreic movement of the musculi papillares can either be the sole cause of a systolic murmur at the apex, or serve to intensify and cause irregularities in an organic murmur, is open to considerable question.

Three cases of chorea have lately been under my care in the Hospital, in each of which warm baths containing sulphuret of potassium were employed, and in each with a very rapid and favourable result.

One case was a girl (M. B.), aged 11 years, who had suffered from acute rheumatism nine months before. The choreic symptoms had lasted three months; they were stationary on admission. After the use of the baths for two or three nights she was much better, and at the end of eight days, having had seven baths, the chorea was almost entirely gone.

Another girl (S. E. L.), aged 10 years, who had rheumatic fever seven weeks before, and chorea of three weeks' duration. There was a systolic murmur audible at the apex of the heart. Her chorea disappeared after taking a bath every other night for a week. The cardiac murmur remained.

The third case was a girl (E. W.), aged 8 years, who had been suffering from chorea for many weeks; her speech was much affected, and her arms and legs were jerked about very irregularly. In this case the baths were required for nearly a fortnight, and were combined with an occasional dose of senna and aloes, and, as the child was weak, steel wine was subsequently given. There was not any distinct evidence of a rheumatic tendency in this case. In the two others, where the baths were so rapidly successful, the chorea was evidently secondary to rheumatic fever. I should certainly be inclined strongly to recommend these sulphur baths in chorea following rheumatism.

* * *

SURREY COUNTY HOSPITAL.—On Friday, the 31st ult., the ceremony of laying the foundation-stone of this Hospital on the slope of the Hog's-back, about 300 yards from the Guildford Railway-station, was performed by Mr. Lewis Loyd, the High Sheriff of Surrey, in the presence of a large concourse of spectators, including Members of Parliament, magistrates, clergymen, and most of the aristocracy of the county. The Hospital, which is to be associated with the name of the late Prince Consort, as a memorial Hospital, is to be built from the designs of Mr. E. W. Lowe, architect, of Guildford, submitted to, and approved by, Miss Nightingale. The estimate for the building is £11,000, and up to the 31st £8000 of this sum had been promised. On that day, at the collation which followed the ceremonial, the sum of over £1200 was subscribed, thus removing all anxiety on the score of funds. Among the donors was His Majesty the King of the Belgians, £100. The Hospital is to be erected on a site presented by the Earl of Carlow. It is to contain two principal wards—one for males and the other for females—each 92 ft. long by 25 ft. 6 in. wide, and 17 ft. 6 in. high. It will afford accommodation for about fifty patients.

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Medical Times and Gazette.

SATURDAY, AUGUST 8.

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HOSPITAL DIETARIES.

Having a few weeks ago considered the Dispensary arrangements of our large Hospitals, we have now something to say about the "kitchen physic." The importance of this cannot be overrated. This we suppose all will be ready to admit. Such of us as are engaged in private practice have to consider its bearings every day and every hour of the day, and he often proves the most successful Practitioner who has learned, in directing the diet of his patients, to temper the strict requirements of a scientific regimen with a judicious concession to individual fancies. It will be the object of this article to inquire how this part of Medical treatment is managed in our public Hospitals.

In providing for the necessary daily wants of the inmates of a Hospital, it is clear that a system of some kind must be adopted, and hence that in this respect the feeding of the people within the building has to be managed much in the same way as if they were gathered together in any other large establishment not specially designed for the cure of the sick, but in which the people to be fed are of a somewhat similar rank in society. Without system, without method in this department, no Hospital could possibly proceed. Hence the plan has been adopted of laying down a dietary table, in accordance with which the food is issued and varied day by day. But here the parallel between provision for the inmates of a Hospital and that for a ship's company, or workhouse, or a prison ceases, and the further we attempt to trace the necessary arrangements, the more do they diverge the one from the other. Regarding the patients in a Hospital as a multitude to be fed, what do we find? Why this:—That there are among them a considerable number, such, for instance, as are there for the cure of various Surgical accidents, who otherwise are in good health, with good appetites and good digestion, who are ready for their food whenever meal time comes round, and for whom it is only necessary to provide a sufficiency of such wholesome aliment as they have been accustomed to before entering the Hospital. Then there is a certain number, chiefly persons suffering from acute diseases in the Medical wards, who have no appetite, who can digest nothing solid, who care nothing for meal times, but who must, nevertheless, have such food supplied to them, at such times, and in such small quantities as may be appropriate for their condition. Lastly, there is a certain number to whom nutriment is of far greater moment than physic, who rebel against the ordinary food of their class, to whom the meal times as they recur in the wards are periods of real suffering, with whom the smell of dinner only raises a feeling of disgust, whose appetite is capricious, but who could eat at odd times if they could then get the food that they fancy, and in a form to tempt them. Such, for instance, are convalescents from acute disease, many females, and especially such patients as are labouring under chronic maladies. Now, we all know how difficult a thing it is in a private family, and how it upsets all the domestic arrangements of a house when such a person is an inmate of it. Does it to an equal degree upset the arrangements of a Hospital, and if it does, ought it to do so? Let us dwell for a short time upon the arrangements usually made in respect of each of these classes of patients.

And, first, as to those who can eat anything. For these, provision is made as it would be in any other large establishment, and we have only to inquire whether it is such as it ought to be, whether it so meets the requirements of scientific dietetics as to constitute an example fit for imitation. A Hospital then provides for such patients what is called "full diet." Where a Hospital is poor, it is a serious financial matter to have in the wards a large number of such patients. In all Hospitals more or less economy must be exercised in supplying them, and hence the meat, bread, milk, etc., are contracted for at a price which will pay a large contractor for the risk he incurs from variations in the market, but which is lower than the retail price of the article as supplied to any one of us by our own tradesmen. The meat is, so far as we have observed, on the whole good but large, and the bread is usually what is known as "seconds," made from flour containing a portion of the pollard, and hence not absolutely white—not so white as the lower classes prefer to have it, but nevertheless such as we ourselves habitually use, and such as is more wholesome and free from adulteration than the whitest bread furnished by London bakers. The milk, we suppose, is as good as London milk generally is; if not, the Hospital authorities have a ready means of detecting its falsification. Allowing, then, as we may, that the food is good and wholesome of its kind, let us see how much is allowed, and let us ask whether everything is met with in the dietary table which ought to be found as constituting a part of a physiological dietary. The following table, as given by Dr. Steele, will assist us here:—

Hospitals.	Per cent. of Patients on Full Diet.	Bread.	Cooked Meat.	Potatoes.	Butter.	Tea.	Beer.	Milk.
Full Diet.		oz.	oz.	oz.	oz.	pt.	pt.	pt.
Guy's	38·3	14	6	8	1	—	1	—
Bartholomew's ..	67·3	14	8	8	1	2	2	—
St Thomas's ..	36·9	12	4	8	¾	2	1	—
St. George's.. ..	·9	12	6	8	1	2	2	—
London	42·1	12	6	8	—	—	1	—
King's College ..	18 6	12	5	8	—	—	—	—
University College(a)	—	16	8	8	—	—	—	½

This table includes the largest of our Hospitals, which being richly endowed, can afford to be liberal, as well as Hospitals which, being mainly supported by the contributions of the charitable, must have a special eye to economy. Judging from the numbers on full diet, the best fed patients would appear to be those in Bartholomew's and London, and the worst fed by far those in King's, and especially St. George's; but we must not be hasty in thus generalising, for it may be that the staff of these Hospitals have a broader licence, or exercise a greater discrimination in ordering for their patients such articles as may be best fitted for each, and so it may turn out that in these establishments the dietary is really better arranged and the patients fed better than in the large endowed Hospitals that we have referred to. Of this, however, we have no means of judging. We recollect, however, that Mr. Charles

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(a) We add this ourselves, as also the middle diet tables for the same Hospital. Mr. Charles Hawkins also has forwarded to us the diet tables of St. George's, as recently revised. The allowances for full (or *extra*) diet differ from those stated in the text mainly in this, that they include a daily allowance of half-a-pint of milk, and a weekly allowance of eight ounces of sugar, while one pint of porter daily is substituted for two pints of ale; this, however, only being allowed to men over sixteen years of age. A pint of gruel is allowed to all patients at supper.

Hawkins, at the last meeting of the Social Science Congress, took great pains to convince the Association that such was the case at St. George's. At all the Hospitals there is a table of what is termed "middle" diet, in which the daily quantities of food, but chiefly of meat and beer, is reduced; but here again the deficiency may be made up by the supply of such extras as eggs, milk, and light puddings. So far, however, as Dr. Steele's table of middle diet goes, we reproduce it here.

Hospitals.	Per cent. of Patients.	Bread.	Cooked Meat.	Potatoes.	Butter.	Tea.	Beer.	Soup.	Milk.	Gruel.
		oz.	oz.	oz.	oz.	pt.	pt.	pt.	pt.	pt.
Guy's	41·2	12	4	8	1	—	½	—	—	—
Bartholomew's ..	15·2	12	4	8	½	2	1	—	—	—
St. Thomas's ..	37	12	4	—	½	1	—	—	—	—
St. George's ..	62 6	12	8	8	1	2	1	—	—	—
London	23·2	12	4	8	—	—	½	—	—	—
King's College ..	—	10	3	8	—	—	—	—	—	—
Middlesex	48·8	12	4	8	—	—	—	—	—	—
University Col. (b)	—	16	—	—	—	—	—	1	½	1

To return, however, to the subject of the "full" diet, we must say that, if the instances adduced are to be taken as fair samples of Hospital dietaries for the class of patients who can eat anything, and have no labour to perform, such persons are kept as well as need be, so far as the allowance of bread, meat, and potatoes are concerned, in the majority of them. In some Hospitals, beer is an extra to be ordered by the Surgeon or Physician, and we see no objection to this. Where tea is allowed, we presume sugar and milk are provided also; but in some Hospitals neither tea, sugar, milk, nor butter appear to form part of the regular dietary. This is not as it ought to be. In the first place, the class of persons admitted into Hospitals, and more especially the female patients, are thus deprived of articles of diet which they not only greatly relish, which they have all their lives been accustomed to, and the deprivation of which by no means adds to their comfort. Necessaries such as these ought to be supplied, as bread and meat are by the Hospital, and ought not to be left to be ordered as extra luxuries, or to be obtained by the external aid afforded by the patients' friends (c). Another improvement that might be made would be the occasional substitution for the everlasting potatoes of green vegetables, salads when obtainable, and pickles for such as like them. The longing after such things is a natural and a physiological one, and in a Hospital especially should be judiciously gratified.

About the supply of the second class of patients we need say but little, beef-tea, milk, barley-water, lemonade, oranges, etc., are never wanting; such patients can take but little, but the nurses are mostly careful that what little they can take they have. As to the beef-tea, however, we think with Dr. Steele that there might be some improvement. He tells us "that it is the practice in most institutions to employ two qualities of beef-tea of unequal strength, containing respectively half a pound and one pound of beef to every pint of water used in the preparation. This arrangement is evidently made with a view to economy; but if the acknowledged object of its exhibition be to introduce into the system as large an amount of nourishment in as small a volume as possible consistent with the requirements of the patient and the gratification of the palate, I do not believe that the maximum amount of one pound of meat to a pint of fluid will be found too much for the most capricious stomach. When well made, no one has ever been heard to complain of the excessive strength of beef-tea." On the other hand, we have ourselves heard complaints, and well-founded ones too, of its extreme poverty. We have seen it neither tempting in appearance nor in flavour.

The last class of patients whose wants will occupy our attention is constituted of those with capricious and fastidious appetites. Such persons in a private family are saved the trouble even of thinking for themselves—their wants and wishes as respects their food being anticipated by the affectionate prescience of their watchful relatives. We all are aware how little harm and often how much good is done in this way. The Physician usually contents himself by pointing out the class of food which may be permitted, and that which, in his opinion, it would be well to abstain from; in other respects a wide choice is left to the patient's caprice or the selection of attendants. Even articles of food, otherwise apparently undesirable, such as shell fish, pickled salmon, etc., when asked for by the patient, are, in the small quantities in which they are eaten, often quite allowable, and must not be condemned by the Physician if he wishes his patient to eat at all. We all know, too, how necessary a thing it is for such, not only that they have the food which at the moment they desire, but that it be forthcoming before the desire for it has passed away, and be presented in a form and manner that shall not inspire dissatisfaction or disgust. Now, in a Hospital the nurse stands in the place of the patient's thoughtful relatives, and, as a body, we must say that whatever kindness can effect which is not the offspring of family affection, is effected, so far as the power of the nurses extends, in the London Hospitals. With Dr. Steele we would see these powers enlarged. We do not believe there would be any danger in enlarging them, and, in certain cases, in permitting the nurse to exercise a discretionary power, such as is delegated to the attendants in private practice. The cases would not be very numerous where this relaxation of discipline would be desirable. As things are managed now, the visit of the Medical man is usually made at a period of the day subsequent to the dinner hour, and any directions as to diet have reference to the succeeding day, when not only the condition of the patient may be altered, but his appetite and desires may be altered also. It is a matter, too, well worthy of consideration whether a relaxation is not desirable in those Hospital regulations by which the little luxuries of humble life introduced by patients' friends are liable to be pounced upon by the Argus-eyed porter. We quite go with Dr. Steele in the following passage, which we quote from his paper in the *Transactions of the Social Science Association;*—"A sick Hospital is so totally different in its object and internal economy from a prison, a workhouse, or even a public boarding-school, that the regulations which are applicable to the latter become doubly vexatious when enjoined as the basis of administration in the former. The object being to obtain for our temporary guests as speedy a restoration to health as possible, it is advisable to relax every moral or physical restriction which can in any way interfere with their wholesome wishes, even to the extent of pandering to their foibles, so long as it can be accomplished without prejudice to the well-being of the patient or to the internal economy of the household." No one is better fitted than Dr. Steele, the Superintendent of Guy's Hospital, to give an opinion upon this matter.

In conclusion, it may not be amiss to furnish our readers with an analysis of one day's dietary in one of our smaller Hospitals. We must premise, however, that as the nature of the cases admitted varies exceedingly at different Hospitals, it is impossible to argue from one to the arrangements of another. By the kindness of one of the Physicians, we have before us the diet sheets of each ward of University College Hospital for May 8. On that day there were to be provided for in the Surgical wards 46 patients, and in the Medical 49. The following tables represent the diets ordered:—

(b) It is the custom at University College, in place of ordering the "middle diet" of the Hospital, to order half the quantity of the "full diet," with such extra allowance of beef-tea, milk, eggs, or beer, as may appear desirable. At St. George's, where this diet is termed "ordinary," it appears from the *revised* table that the same allowance of milk, sugar, and gruel are made as in the "full," or "extra" diet, and that half a pint of porter is allowed in lieu of the pint of ale.

(c) With respect to milk, however, it is to be observed that it is specially mentioned in all the diet tables of the University College Hospital, and Mr. Hawkins informs us that although, as at most Hospitals, there is a special "milk diet" on the tables, milk is also supplied at St. George's to every patient daily, whatever diet he may be upon.

Full Diet—Numbers on Extras.

No. of Patients on this Diet.	No. of Patients.	Beef-tea (ordinary).		Strong Beef-tea.	Milk.			Porter.			Ale.		Jelly, Eggs, Custard, or Rice Pudding.	Wine.	Spirits.
		1 pt.	2 pts.	1 pt.	2 pts.	1 pt.	½ pt.	2 pts.	1 pt.	½ pt.	1 pt.	½ pt.		2 to 6 ozs.	2 to 8 ozs.
44, or 46·3 pr. cnt.	Surgical, 26	11	1	1		14	1	3	13	2		1	5	8	4
	Medical (d) 18	14			1	17			5		1			1	1
	Total, 44	25	1	1	1	31	1	3	18	2	1	1	5	4	5

Hence it appears that, as might be expected, a larger proportion of Surgical patients than of Medical were on full diet, and that of the whole 44 there was not one that had not some extra diet allowed in addition. Some of them lived as well as any gentleman at his private table, if it is considered that, in addition to the full diet, beef-tea, milk, eggs, custard pudding and porter were also supplied.

The Hospital middle diet was not prescribed at all, but the numbers upon *half* full diet were as follow:—

Half-Diet—Numbers on Extras.

No. of Patients on this Diet.	No. of Patients.	Beef-tea (ordinary).	Strong Beef-tea.		Milk.		Porter.		Ale.		Jelly, Eggs, Custard, or Rice Pudding.	Wine.	Spirits.	Fish.
		1 pt.	2 pts.	1 pt.	1 pt.	½ pt.	1 pt.	½ pt.	1 pt.	½ pt.				
26, or 27·3 per cent.	Surgical, 16	4	1	1	14	1	4	1		2	2	1	3	
	Medical, 10	9			10		1	1	1	2	1	2		1
	Total, 26	18	1	1	24	1	5	2	1	4	3	3	3	1

It appears, thus, that all on half-diet in the Medical wards, and nearly all in the Surgical had a pint of milk additional, and half of them had beef-tea. In one case the diet consisted of the half-diet of the Hospital,—beef-tea, fish, eggs, milk, custard pudding, and ale. As with those upon full diet, there were none who had not some extras allowed them.

We have thus disposed of 70 out of the 95 patients, the remaining 25 had their diet specially ordered as follows:—

No. of Patients on various Fancy Diets.

No. of Patients on this Diet.	Surgical.	Chops.	Beef-tea (ordinary).	Strong Beef-tea.		Milk.		Porter.		Ale.	Jelly, Eggs, Custard, or Rice Pudding.	Wine.	Spirits	Oysters.	Fish.	Mutton Broth.
			1 pt.	2 pts.	1 pt.	2 pts.	1 pt.	2 pts.	1 pt.	½ pt.						
25	{ 4		2		1		4	1		1	4	2	2		4	1
	{ 21	4	14	2		1	17		2	2	8	9	4	1	13	
Total	25	4	16	2	1	1	21	1	2	3	12	11	6	1	17	1

These patients, when desiring it, have extra bread and potatoes. Out of the 25, there were but 3 who were not on an extra allowance of milk, and 17 were allowed fish. There is one result of these tables, however, which we were not prepared for, namely, the small number to whom the strong beef-tea was allowed. Out of 61 patients of whose diet beef-tea formed a part, that supplied to 55 was the ordinary watery beef-tea of the Hospital. Out of the 95 patients also who had various diets, 80 had an extra allowance (mostly a pint) of milk.

THE WEEK.

THE DEFINITION OF CHILDBIRTH BY THE POOR-LAW BOARD.

It will be seen from the correspondence published in another column that the Poor-law Board have disallowed fees to Medical officers for attendance on women prematurely delivered, except in cases "in which the child was, or might have been born alive," this being the construction the Board put upon the term "childbirth" used in their regulations. We say nothing of the ill-judged parsimony and manifest hardship of refusing a special fee in a class of cases which not unfrequently tax the Practitioner's skill and patience, no less than those of parturition at the full time of gestation. It is only what might have been expected from authorities who sanction and support the miserable scale of remuneration by which Professional men, who devote their skill and energies to the sick pauper, are held to be paid. But we wish to call the special attention of Poor-law Medical officers to the definition to which the Board have now committed themselves. "*Childbirth* only applies to a case in which the child *was, or might have been born alive.*" It is not therefore limited to cases in which the child is viable or capable of living. The question therefore is, at what age might a child be born alive? In answer to this there can be no hesitation in affirming that a child has been born alive at five months and earlier. There is a case recorded in the second volume of the *British and Foreign Medical Review*, p. 236, of a child having been born living as early as the fourth month of gestation, and another instance is recorded by M. Maisonneuve in which a woman aborted at the fourth and a-half month of pregnancy. Two hours afterwards, on laying open the membranes, Maisonneuve found the fœtus moving, and on applying warmth the respiratory movements were established, and it lived six hours. Instances of children born alive at the fifth month of pregnancy are not rare, as will be seen on referring to the section on viability in Professor Taylor's work on "Medical Jurisprudence." It is well that the distinction between viability and the possibility of live birth should be borne in mind, as the Poor-law Board have thus laid down a definition of "childbirth." The distinction is not allowed in the French civil code, but it is established by the law of this country. A child if born living, according to English law, is entitled to civil rights. It is not necessary to prove that it is sufficiently mature to be capable of continuing existence. The slightest movement, independently of respiration or crying, on the part of a child entirely separated from the mother, has been held sufficient proof of live birth. In the case of Fish *v.* Palmer, a tremulous motion of the lips was allowed to be such evidence, and decided the possession of an estate. The Poor-law Board having laid down the meaning of the term "childbirth," we hope that our Poor-law Medical brethren will keep fully in view the possibility of live birth at a very early period of utero-gestation. In the cases out of which the correspondence between Dr. Linnington Ash and the Poor-law Board arose, we shrewdly suspect that, according to their own showing, the Doctor was entitled to his fees, as it is stated in the letter of the clerk to the Holsworthy Guardians that "neither woman was *more than five months* advanced in pregnancy." But if the women were even less advanced than the period stated, the children might certainly have been born alive, and the cases are therefore within the meaning of "childbirth" as interpreted by the Poor-law Board.

THE NEW SITE OF ST. THOMAS'S HOSPITAL.

We have received information that the authorities of St. Thomas's Hospital have purchased the Stangate site on the bank of the Thames, between the south end of Westminster-bridge and the Archbishop of Canterbury's Palace, opposite the Houses of Parliament. Our objections to this situation have already been stated, and we have heard nothing which has induced us to alter our opinion. We cannot congratulate the Governors on the choice they have made. They have determined on removing the Hospital from the population for whom, it has been repeatedly asserted, that it was especially intended, and they have resolved to place it on the very brink of a tidal river, which, in its course, is to receive all the filth and refuse of the largest city in Europe. Even supposing the purification of the Thames to be accomplished by the Main Drainage operations, its banks will still be the peculiar home of fog and damp. The site of Bethlehem would have been preferable to this. But we still maintain that a well situated country Hospital, near a line of railway, within a short distance from town, supplemented by one or two smaller establishments in south London for cases not admitting removal, would have best answered the requirements of hygienic science, and would have conferred the greatest benefit on the sick poor of the metropolis.

(d) Being a small Hospital, the greater number of Medical patients are *acute* cases.

THE ASTON PARK ACCIDENT.

THE letter written by command of Her Majesty to the Mayor of Birmingham is, in truth, a most telling reproof to the passive immobility of Sir George Grey and Earl Granville. The principal people of Birmingham and its neighbourhood have addressed a memorial to the Home Secretary on the subject of the recent catastrophe, whereupon he has written a letter to the Directors of Aston Park mildly hoping they will not allow a repetition of such dangerous performances. The purport of the answer of the Directors is, that they had no control over the performances on the occasion of the accident, and that personally they concur in the sentiments of the memorialists. If the police can legally stop a bull-baiting, and a country squire is not allowed to fight a main of cocks in his stable, why should men and women be permitted to peril their lives for the pleasurable excitement of the populace? The *Times* says that legislation on the subject would be a disgrace to the country. This may be, but the degradation would not be so great as the disgraceful spectacle of Leicester-square thronged with carriages waiting for the admirers of Leotard, and the recent desecration of the Crystal Palace by Blondin. If Government refuse to bring in a bill next Session to put a stop to such practices, there is no doubt but that it will be done by some "independent member." Its fate will then very likely be defeat or withdrawal. As a result, in a few years the Birmingham accident and the Queen's letter will be forgotten, and the caterers for the public taste will be certain to recur to exhibitions which never fail to draw in proportion as they are brutal and demoralising.

THE HOATH MURDER.

THE conviction of Alfred Eldridge for the murder of Richard Steed, at Hoath, near Herne, in Kent, on what is called "circumstantial evidence," confirmed as it was by the half confession of the accused, affords no ground for misgiving. Seldom, indeed, has a charge been more clearly brought home to a prisoner. The conviction was supported by, although not based entirely on, the Professional evidence of Drs. Taylor and Pavy. Dr. Taylor's evidence related to the identification of blood-stains on the trousers of the prisoner, and of certain fibres and hairs found sticking on his boots. The fibres, under the microscope, presented the appearance of the red woollen fibres of which the murdered man's comforter was composed, and Dr. Taylor had no hesitation in declaring that some of the hairs found sticking to the boots were human. In cross-examination, he admitted the difficulty of distinguishing, by the microscope, human blood globules from those of certain animals, but he expressed himself with the utmost confidence as to the character of the hair. During his cross-examination by Mr. Barrow, he said:—

"As to the hairs he had no doubt whatever they were human. He had found no hair they resembled but human hair, except that there was a hair like that of an eyebrow or whisker—rather stronger than that of the head.

"Mr. Barrow: Was it not like that of the hare?

"Dr. Taylor: Not at all. The hair of that animal is very easily distinguishable indeed. He found three hairs—though there might have been more in the mud, and he did not try to discover more. One of them was of some length."

Dr. Taylor's evidence was supported and confirmed by Dr. Pavy, who had made separate examinations of some of the blood-stains and hairs found. Dr. Pavy said, to the best of his belief, the hair he examined, which was two inches and a-half in length, was human, and that it seemed the same with some hair from the head of the deceased with which he had compared it. Dr. Pavy also found that the fibres on the boots corresponded with those of the comforter. There can be no doubt that in this case science has been most useful in confirming the general evidence, and it was in this light the Judge, Mr. Baron Channell, regarded it. He said, "that the scientific evidence did not so much carry the case further against the prisoner as give clearer grounds for the facts stated."

BARON VON LIEBIG ON THE SEWAGE OF LONDON.

A VERY important letter from Baron Liebig on the value of the London sewage has appeared in the *Standard* and some other of the daily papers. It is to be hoped that the weight of the remonstrance thus offered by the great German chemist will have its due influence on the deliberations of the Metropolitan Board of Works. At any rate, it is well that men of education, and especially our own Profession, should be made aware of the facts which underlie the question of the utilisation of the sewage, and their importance to the national resources and industry. The following is a *resumé* of Baron Liebig's calculations and deductions. Manure is of two kinds, artificial and organic. The manufacture of artificial manure is based on the doctrine that the nourishment of all cultivated plants consists of inorganic or mineral substances. The most important fabrication is that of superphosphate of lime. Manure consisting of organic substances can be produced by the agriculturists only. The value of the sewage may be found by comparing its constituents with those of guano. How much of the efficient elements of guano can a farmer convey to his field in a ton of sewage, or how many gallons of sewer water are equivalent to a cwt. of guano? We know the component parts of guano, but in the case of sewer water we have less certain and reliable data. Professor Way, however, has analysed the water of two sewers, one in Barrett's-court, and one in Dorset-square. He found in one gallon of sewer water:—

	Barrett's-court.	Dorset-square.
Ammonia . .	41·18 grains. . .	17·96 grains.
Phos. acid . .	10·44 „ . . .	4·17 „
Potash . .	48·18 „ . . .	3 32 „

The difference between these specimens of London sewage is great. That of the court contains 29 times more ammonia and phosphoric acid, and nearly 15 times as much potash as that of the square. Baron Liebig takes that of the square as the standard of his calculations. Peruvian guano contains 14 per cent. of nitrogen, 17 per cent. of ammonia, 12 per cent. of phosphoric acid, and $\frac{6}{10}$ths per cent. of potash. Therefore 101 tons (20,200 gallons) of the Dorset-square sewer water contain the same amount of phosphoric acid, more than 3 times as much ammonia, and 16 times as much potash as 1 cwt. of the best Peruvian guano. The great difference between the two is in the proportion of phosphoric acid to ammonia. In guano the proportion is 6 parts of phosphoric acid to 8½ of ammonia, in sewer water it is only 6 parts of phosphoric acid to 26 of ammonia. The difference depends on the fact that the bones of slaughtered animals do not find their way into the sewage. Phosphates, however, must be restored to the soil if it is to retain its fertility. They are much less costly than ammonia and potash, but the latter are valueless as manure without phosphoric acid. It becomes therefore necessary to supplement the sewage with superphosphate supplied by the manufacturer, who, however, cannot furnish at an available price the more costly ammonia and potash. The utilisation of the sewage would not therefore rob the manufacturer of his occupation, it would rather give a fresh spur to this branch of industry.

"If the farmer adds to the sewer water the phosphate which is wanting in it, the efficiency of the water will be increased thus:—101 of sewer water, to which 120 lbs. of superphosphate have been added, are equivalent to 305 lbs. of Peruvian guano; and the value of the sewer water will be —305 lbs. of guano at £13 12s. 6d. per ton =498 pence. From this subtract the price of 120 lbs. of superphosphate, at £5 5s. per ton = 76 pence, which gives the value of 101 tons sewer water = 422 pence, or 4d. for 1 ton of sewer water."

Liebig calculates that the liquid and solid voidings of London would yield 42 tons of ammonia, 10 of phosphoric acid, and 7½ of potash daily; the ammonia equal to that contained in 247 tons of guano, the phosphoric acid equal to that contained in 83·3 tons of guano. If therefore to the daily sewage of London 100 tons of superphosphate of lime, containing 20 per cent. of phosphoric acid, be added, the value of the daily voidings of London is made equivalent to that of 247 tons of Peruvian guano. The yearly value of the sewage, after deducting the price of the superphosphate, would be that of 90·155 tons of guano at £13 12s. 6d. per ton, minus £191,628, or £1,036,628. If to this be added the value of the surplus potash in the sewer water, it gives a total of £1,109,006 annually. The surplus potash daily corresponds to the amount contained in 866 tons of stable-dung. The conclusion of Baron Liebig's letter is sufficiently startling, as it prophesies a complete revolution in the employment of a large portion of the population and capital of the country as the consequence of a return to obedience to common sense science:—

"We may assume that one-third of the population of Great Britain, or ten millions of men, live on corn and agricultural produce imported from abroad. For this a pretty considerable number of millions of pounds sterling must be paid, besides another pretty considerable number which must be earned by the nation in order to pay for the purchase of manures to produce the food of the remaining twenty millions of inhabitants. Many superficial observers appeal to statistics which appear to show that much of the land yields one-third more than it did in the last century; and this is not, they say, a sign of decrease of fertility; but they forget at what cost these larger crops are obtained, and that they are due to an enormous expense of capital for the purchase of foreign manure. It is a sign of a poor or an exhausted soil if, in order to get high returns, we have to add large quantities of manure from without. A rich or fertile soil does not require such an addition.

"The employment of sewage in agriculture would make it possible to bring large tracts of land into cultivation which hitherto, owing to the expense of tillage, have lain waste and neglected. Others, too, might be so improved as to make the crops remunerative, and good fields would bring in a larger revenue.

"The vast capital which hitherto has left the country to pay for corn and manure might be kept at home and employed for other purposes. Should the present state of trade and industry not materially change, a great part of this capital would be devoted to agriculture, and the natural consequence would be that the increasing population would find ample occupation in husbandry.

"Great Britain is large enough, if we take the arable surface of the land, to produce all the corn and meat necessary for its inhabitants; and it is neither fantastic nor ridiculous to suppose that, without purchasing foreign manure, and by a judicious utilisation of the sewage of towns and villages, England would be able to dispense with the importation of food from abroad. For her it would be a blessing if the application of capital to agriculture were found sufficiently profitable to create speculation in this direction, so that the industrial population, manufacturer and tradesman, might devote themselves to the production of bread and meat. These men are quite of another stamp to the present farmers, and care little for tradition or the authority of custom. They know their multiplication table, however, and in competition with such men the farmers would find it impossible to persevere in their old jog-trot ways. The change thus brought about would be as great as after a revolution."

FROM ABROAD—ALUMINIUM BRONZE FOR INSTRUMENTS—INDOLENCE OF THE PROFESSION—CARBONIC ACID OF THE ATMOSPHERE—CONDITION OF THE RECRUITS OF THE AMERICAN ARMY—CONTAGION OF TYPHOID FEVER—NEW PRIZE SUBJECTS—ELECTIONS AT THE ACADEMY OF MEDICINE.

M. **Morel-Lavallée** has recently made a very favourable report to the Paris Society of Surgery upon a pocket-case of instruments, fabricated by MM. Robert and Collin, of aluminium and bronze, the alloy varying from 5 to 10 per cent. of aluminium. All the instruments, except the blades, are made of this; and they may advantageously replace the much dearer silver in many cases, and in others, iron, or even steel. The metal is not oxidisable, and preserves all its brightness amidst the various agents it is brought into contact with in daily practice.

Our estimable contemporary, the *American Medical Times*, roundly charges the Medical Profession with gross and increasing indolence as regards efforts for the advancement of Medical knowledge; and although he only has New York in view, and probably does not allow enough for the pre-occupation of men's minds by the war, there can be no doubt that he delivers some grave truths, which are, moreover, not without their application on this side the Atlantic. Thus he laments the present position of the Medical societies, dependent upon the labours of a few workers for their very existence. Discussions of interest and importance are rarely raised or kept up, influential members, whose matured opinions and healthy counsels would be gladly listened to, rarely attending. Then, again, in this age, when good books have almost ceased to be written, the Medical periodicals do not exhibit that abundance of contributions of a scientific character and authoritative value emanating from able pens which might justifiably be expected. How have vast opportunities been utilised, where are the results, and are the holders of these valuable trusts content with that prospective oblivion which awaits them? We quite agree with our contemporary that the excuse so commonly proffered of want of time is but a sorry one, and that lack of energy to turn spare time to account is the true solution. A deep sense of the personal responsibility incurred by the attainment of an elevated position will alone secure the due development of its capabilities and the promulgation of its teachings.

M. Mène announces to the Academy of Sciences, as the results of his researches upon the dosage of carbonic acid gas contained in the atmosphere, that the proportion varies during the course of the same year. It is increased in February, March, April and May, to become diminished from June to August, after which there is an increase from September to November. The maximum is attained in October. During the night there is more than in the day, and more after rain than at any other portion of the day.

The losses in the American army from recruiting men unfit for service, or who have been afterwards rendered so by their unsanitary management in the interval elapsing before they could be brought in face of the enemy, has been very serious. It has been estimated that at least 60 per cent. of the invaliding and sickness may be attributed to these removable causes, while of the deaths from disease, independently of wounds, a still larger percentage may be thus accounted for. In a force of 9000 select and rapidly raised recruits from New England, 33 per cent. were placed on the sick-list within a few weeks after their arrival at their barracks in New York; and, upon their departure for the seat of war, nearly 30 per cent. of the original force was left behind as invalids. The colonel of one of the best regiments that was ever quartered at the New York rendezvous also declared that, after seven weeks' residence in these stifling quarters, the military strength and value of his regiment had become permanently diminished 30 per cent.

M. Gintrac, of Bordeaux, laid before the Academy of Médecine an account of two epidemics of typhoid fever which he had witnessed, with a view of proving the contagious character of the disease. Bretonneau had already signalised its contagiousness, but great difference of opinion has since prevailed upon the subject. It is true that this is not its ordinary mode of origin, for there are certain localities which seem as suited for its production, as marsh districts are for intermittent fevers, and certain equatorial regions for the yellow fever. But, while typhoid fever may not appear to be contagious when its etiology seems to resemble that of endemic disease, this is not the case when it arises in very healthy localities, which do not favour its primary development. M. Gintrac has had the opportunity of observing two epidemics, which had prevailed one after the other, in two districts entirely differing from each other, telluric influences operating in the one case and contagion in the other. In the latter healthy locality, the transmission of the morbific principle could be traced successively through twenty-two individuals. Among the agents of this contagious propagation was an infant eight months old, suckled by its mother, the subject of typhoid. The infant fell ill, and, transported to a certain distance beyond the contagious centre, communicated to its new nurse the disease which it had drawn from the breast of its parent. M. Gintrac, practising in a large town, and long since attached to a vast Hospital, having never observed a positive example of the transmission of typhoid fever, was not a believer in its contagion until the facts above adverted to came under his notice.

Two new prizes of interest have been announced in Paris; and certainly in this matter the Paris academies and societies, by the number and liberality of their prizes, put to shame our own niggardliness, that is to say, if we profess belief in the desirableness and efficacy of these stimuli to investigation. One of these prizes arises from a legacy left by Baron Barbier, formerly Chief Surgeon of the Val-de-Grâce. An annual award of 2000 francs is to be made in November by the Faculty of Medicine to the inventor of an operation, or instruments, bandages, apparatus, or other mechanical appliances recognised of general utility and superior to anything already devised. The other prize is offered by the Paris Medico-Practical Society, viz., 300 francs for an essay relating to obstetrics, the choice of the precise subject (icterus, obstinate vomiting, bleeding in pregnancy, difficult labour, the induction of premature labour, hæmorrhage, sudden death, Cæsarean operation, forced post-mortem delivery, etc.) being left to the candidates themselves. The essay must be original and unpublished, well supported by cases, and preceded by a succinct account of the state of science as regards the subject treated of in the memoir. Written in French or Latin, the memoirs are to be addressed to Dr. Perrin, 9, Rue Charlot, before December 31, 1865.

At the Academy of Medicine two elections have just taken place for National Corresponding Members. In the section of Surgery M. Reybard, of Lyons, was the successful candidate, and in the section of Chemistry M. Favre carried the day.

Lunatics in Workhouses.—The Commissioners in Lunacy state in their last Report that they have never ceased to be of opinion that workhouses are altogether unsuitable for the treatment of the insane, and that many curable cases are thus kept in the gloomy unfurnished wards, with low diet and narrow airing courts, until their disease becomes chronic and their cure hopeless. Yet a return just issued stated that in the single year 1861 no less than 5072 lunatics were received into workhouses in England and Wales. In the majority of instances there is no lunatic ward in the workhouse, and the insane, if not dangerous, are mixed with the sane.

BRITISH MEDICAL ASSOCIATION.

The annual meeting of this Society commenced in the Victoria Rooms, Clifton, on Wednesday, the 5th instant, under the presidency of Dr. Symonds.

After preliminary meetings of Committee and Council, the President's address was delivered at four o'clock in the afternoon.

Dr. Burrows, the retiring President, addressed some remarks to the meeting, commenting on the success of the previous annual gathering held in London, both in a scientific and social point of view, and congratulated the members of the Association on the final breaking down of the distinction formerly existing between metropolitan and provincial Professional members.

Dr. Symonds then took the chair, and proceeded to deliver an able and thoughtful address. He commenced by contrasting the state of medicine at the last meeting held in Bristol, thirty years ago, with the development which it has since then received. More particularly he pointed out the advance since then of microscopic research; the investigations of the late Dr. Bright in renal pathology; the discovery of anæsthetics, and the total change of views respecting uterine disorders, in the treatment of phthisis, and in many departments of Surgery. He then proceeded to the principal topic of his discourse,—the public appreciation of Medicine as an art and science. At all times, he believed, the majority of civilised men had accepted the advice and teaching of our Profession; although there had always been some opposition, varying in force and character, and a more persistent, though less hostile undercurrent of satire directed against its tenets. He showed that the amount of "contingent matter" involved in Medical speculation, as well as the natural tendency of the ordinary mind to come to a rough estimate from gross results, fully accounted for this diversity of opinion; and he appositely cited a passage from Lord Bacon, where Physicians were held to share such disability with politicians. Moreover, it was impossible but that the natural excitement in the feelings of bystanders under the great emergencies of sickness and accident should lead them to a varying and occasionally harsh estimate of the curative powers which the Medical man brought to their relief. Over and above these instances, he allowed that scepticism actually prevailed among many sections of the public at large in respect to the truth of Medicine,—a scepticism fostered by works of like character, by occasional successes of unassisted Nature, or of charlatanism, and also by conflicting opinions of Medical men themselves, as well as by an inclination to what might be termed fashions in practice, often more obvious to the external world than to ourselves. He deprecated, lastly, those unwise admissions of weakness which had occasionally fallen even from eminent men, and which not unfrequently resulted in an unforeseen depreciation of our art. In illustration of the more ordinary forms which this public scepticism assumed, he quoted from the ablest literary journals of the day, and considered their hostile comments to resolve themselves ultimately into two accusations; the first, that Medicine was not really a science in the full acceptation of the term, and the second, that it was a mere congeries of empirical traditions and processes only half understood. To the first charge he replied at length, that if the observation and record of phenomena, followed by their classification and analysis, answered the definition of science, this Medicine fulfilled accurately. To the second he answered that it was simply untrue and a mere delusion, encouraged possibly by misrepresentations, often springing from our own body, from persons interested in some peculiar view, and endeavouring to substantiate this by depreciation of all others, or from men disappointed in the struggle for success, and uttering "treasonable words" against the cause of their disappointment. He argued that the competent Physician was aware of whatever force might lurk in either of these impeachments, and that he met it by an honest endeavour to found scientific principles on a judicious empiricism. He knew that there was much to be learned in every science or profession, but that it would be a fundamental error to neglect what was known for what was unexplained and perhaps inexplicable. Even the chemist found no impediment to the pursuit of this science, in the fact that the elective affinity on which the basis of his knowledge rested was a fact far beyond his powers of elucidation. After affirming that the administration of specifics, as understood by the outer world, formed but a small part of medicine, and might be considered a mere popular error, Dr. Symonds proceeded to notice the growing disposition not to interfere violently with Nature, and the line of practice, both Surgical and Medical, which had been rightly named conservative. He attributed the fluctuations in our art, which are arrayed in evidence against us, often to real changes in the type of disease; still more often to changes in habits, or in those great national customs on which much of our disease and suffering hangs suspended. And granting that some obloquy may have fallen to us from real mistakes, granting that errors may here and there have lessened our social *prestige*, he asked has not any art and science these mischances, in spite of their far greater simplicity? The crying need he asserted to be a more general cultivation and diffusion of knowledge on Professional subjects. Most of the scepticism in vogue he thought referable to ignorance or partial knowledge. He wished that such doubters could be shown over our Medical schools, our clinical wards, and the laboratories of our physiological experimentalists. They should thus be made to feel that Medical teaching appeals to qualified judges only, to such as have grounded their minds in a comprehension of preliminary subjects, and that Medical men only claimed or valued an "intelligent deference." He was far from denying the difficulty and complexity of the subject; it would be strange if it were otherwise; nor could a Medical man hold a system but as self-condemned which recommended itself to the public by its simplicity. One example of this fact was given in the peculiarities of personality which rendered each man as different from his fellow-man in constitution as in appearance, although perhaps it might be a dangerous doctrine that "every son of Adam required his own form of medicine." He then adverted to the obvious proofs of confidence in our Profession on the part of the public which were patent to all; our functions in the Army and Navy, and especially with insurance societies, who staked their property on Medical verdict. He spoke of Medical men distinguished in the literary and scientific world, such as Dr. Pritchard, and more lately Sir H. Holland; but while, perhaps, the present time was not so fertile in great and pre-eminent names, he considered the average standard of competence to have risen greatly; and he congratulated his contemporaries on the disappearance of that distrust of general accomplishments which had hindered both our Profession and the sister Profession of the law. Lastly, the President warned his hearers not to run into opposite extremes, by showing an indifference to uninitiated opinion; our study, he said, involved us in our friends, and neighbours, and fellow-creatures' sufferings, and we might justly seek their good will, both as a greater means of power and as a legitimate aspiration after fame. He had purposely avoided the consideration of his subject in its moral aspect; the account of our talents in that direction he believed to belong to a higher and greater tribunal, which would take account to the utmost of our good deeds, and would in no wise undervalue the services rendered by men to their brethren in the practice of the art of healing. The President concluded a long and interesting address amidst loud applause.

After the reading of a most favourable report from the Council, the meeting adjourned.

In the evening, a *conversazione* at the Bristol Literary and Philosophical Institution concluded the day.

REVIEWS.

A Treatise on Gall-stones: their Chemistry, Pathology, and Treatment. By J. L. W. THUDICHUM, M.D., Member of the Royal College of Physicians. Illustrated with Two Coloured Plates. Demy 8vo. Pp. 323. Price 10s. London: Churchill and Sons. 1863.

THIS work is divided into six chapters, the 1st containing a copious digest of the historical literature of gall-stones; 2nd. Their physical description; 3rd. Their chemistry; 4th. Their origin and theory; 5th. The anatomy of gall-stone disease, illustrating not only the characters of calculi, but also their relations to, and effects upon, the biliary cyst and passages; 6th. Its pathology and treatment, with illustrative cases. It is in fact a very elaborate as well as able monograph, embracing a minute consideration of every point connected with gall-stones, and on several of these points throwing new and welcome light. We shall briefly notice the more important contributions herein made to our knowledge of the subject.

Dr. Thudichum's researches render it highly probable that, though the majority of gall-stones are formed in the bladder, the primary nucleus is generally imported thither in the shape of concrete casts from the smallest biliary ducts. In several gall-stones taken from a patient who had died of dropsy he actually proved this to be the case. The plates which the book contains are illustrative of the microscopical appearance of these casts.

The chapter on the chemistry of gall-stones gives a detailed account of the analysis and composition of all varieties of these concretions in man and animals. The amount of original research which Dr. Thudichum has undertaken in this field is immense, and has been by no means unfruitful in results. Additional light is thrown on the chemical nature of cholochrome (the colouring matter of bile) and its derivatives. He is likewise enabled to offer a new classification of gall-stones, founded on their chemical composition. This classification is well worthy of the attention of curators of museums, as affording them facilities for the practical arrangement of their collections.

A knotty point, which Dr. Thudicum has helped to solve, is the nature of the morbid process to which gall-stones owe their origin. In this process two things have to be considered. (1.) The decomposition of the bile, and consequent precipitation from it of the different materials which form the nuclei of gall-stones. (2.) The mode in which such precipitates come to form concretions. The cause of the decomposition—that is to say, the pathological condition of the liver in which it originates—is still a mystery. Dr. Thudichum suspects it to be some putrid ferment generated in, and absorbed from, the intestinal canal. But, be the cause what it may, the fact that the first step in the formation of a gall-stone is decomposition of the bile and precipitation of certain of its ingredients is now undisputed; and by the light of the chemical changes, which he has ascertained to take place in putrefying bile outside the body, the author attempts to explain the exact nature and successive steps of this decomposition. His explanation is too long for quotation. We would merely remark that it appears to us very reasonable, being (as he fairly claims it to be) "derived from all the data on record, with only so much of hypothesis as seemed justified by the amount of incontrovertible knowledge." As to the second point, viz., how concretion of the precipitates is effected, he shows the untenability of the old hypothesis, which ascribed it to inspissation of mucus or bile, and maintains that "the binding material of the nucleus of gall-stones is cholic acid, or chloidic acid, or both."—P. 166.

The author's description of the symptoms of gall-stone colic is of great value, because based exclusively upon cases in which the gall-stones were found after death. The general opinion, that these concretions produce symptoms only when lodged in the *common* duct, has (he observes) of late "become very doubtful, as it has been found that calculi in the *hepatic* duct or ducts produce symptoms of a peculiar kind, differing from the symptoms of gall-stones in the gall-bladder and common duct by the absence of pain, and having the greatest resemblance to chronic intermittent fever. In one case treated by Frerichs for a long time by means of quinine and other febrifuge remedies, the rigors and other symptoms simulating fever were caused solely by calculi in the hepatic duct; their presence had not been suspected during the life of the patient."

Retardation of the pulse he holds to be a pathognomonic symptom in this disease. In forty-five cases observed by Wolff, "the symptom of diminished frequency was so constantly found during frequent observations, that in doubtful cases (*i. e.*, in absence of jaundice) it was mainly relied upon for the diagnosis."

Jaundice he believes to be by no means of such frequent occurrence during the passage of gall-stones as is commonly supposed. It was present in only twenty out of Wolff's forty-five cases. "The number of cases in which no jaundice appears is probably still larger in comparison to those in which it appears, as cases of the former kind easily escape diagnosis, while those accompanied by jaundice are never lost sight of."

Dr. Thudichum's remarks on the treatment of gall-stone disease, though advancing nothing positively new, contain some useful practical hints. He illustrates the necessity of leaving remedies, and directions for using them, with persons who have once had serious gall-stone colic, so that, in the event of any sudden return, they may be employed without loss of time. The only known internal remedies effectual in mitigating the pain during the paroxysms are anodynes, such as opium, belladonna, and ether; but much caution, he shows, is needed in their administration, because when they have been taken in large doses they are apt, after cessation of the pain, to produce dangerous symptoms of narcotism. Both reason and experience, in his opinion, contra-indicate any abstraction of blood, either local or general, during the passage of the concretions. Their solution in the living body he believes to be impossible; their expulsion during the use of certain mineral waters (Carlsbad, Marienbad, Ems, Vichy, and others) he admits, but confesses himself unable to explain. He summarily condemns the practice of giving mercury in cases of jaundice from calculous obstruction, "or in any other cases of jaundice from whatever cause, syphilis excepted. Calomel is not a cholagogue, but diminishes the secretion of bile. . ." We cannot go the same length as Dr. Thudichum in condemnation of this remedy. To give it in jaundice from obstruction is manifestly senseless and mischievous. But, be the action of mercury what it may, in many cases of functional jaundice (especially in children) we find a moderate dose of calomel set the patient to rights so promptly, efficiently, and safely, that even Dr. Thudichum's strong disapproval will not persuade us to discard its use.

Except in the matter of style, which might often be improved, this work in all other respects reflects the highest credit upon its author. The researches, herein detailed, concerning the mode of formation and the intimate structure of gall-stones, could not have been prosecuted except by a chemist profound in knowledge and expert in analysis. The industry and discretion with which, in illustration of his subject, he has collected facts and cases from all quarters (English, French, German, Italian, etc.), are especially worthy of praise. The treasures, which lie buried in the periodical Medical literature of different countries, are immense; and Dr. Thudichum's "Treatise on Gall-stones" is a happy instance how by competent hands such treasures may be exhumed and turned to good practical account.

PROGRESS OF MEDICAL SCIENCE.

Selections from Foreign Journals.

HEREDITARY CATARACT.

By Dr. FROBELIUS.

Dr. Frobelius related to the St. Petersburg Medical Society a case of cataract, as observed in the fourth generation, expressing his opinion that the affection may be hereditary. Indeed, several interesting cases have been related by Beer, Lusardi, Arlt, etc. According to the last-named author, we may regard cataract as hereditary, when the same form of the disease (according to him, soft lenticular cataract,) is observed affecting both eyes at the same epoch of life, this not being in old age, but during the first half of life. The instance adduced by Dr. Frobelius was the following:—M. F. was twice married. By the first wife, whose eyes were healthy, he had two children, whose eyes, as well as those of their children, were not defective. His second wife became, in her sixtieth year, the subject of cataract, which was operated upon; and she lived, having the use of her eyes, until her eightieth year. She bore twelve children, of which number four became the subjects of cataract, the remainder of the family, as well as their children, having good eyesight. Of the four the subjects of cataract, the following account is given:—1. Amalie F. married into a family in which cataract was unknown, and was operated upon when near 69 years of age. She had a son, Reinhold, who was very early blind, and twice operated upon without success. Reinhold also had a son, who became cataractous in childhood, and was operated upon with success. A sister of Reinhold had a daughter who became the subject of cataract in her tenth year, and was operated upon with success. 2. Louisa F. married into a family in which cataract had not appeared. In old age she had cataract, and died without any operation. Of her eight children, two had become cataractous by the thirtieth year of their age. 3. Natalie F. had feeble sight, and of her four children one suffered from cataract. 4. George F. was operated on with success for cataract in his old age. He had ten children, and of these three had cataract while young. Of the great-grandchildren, none have as yet exhibited cataract. The author believes these twelve cases suffice to prove the hereditariness of the affection, although the cataract has not always assumed the same form, or appeared at the same age.—*St. Petersb. Zeitschr.*, vol. ii., p. 281.

EXCERPTA MINORA.

Tetanus of New-born Infants.—M. Hervieux thus sums up an interesting paper giving an account of two cases of this affection:—1. New-born infants are liable to an affection presenting all the characters of true tetanus, which must not be confounded with tetaniform eclampsia. 2. It manifests itself by tetanic rigidity of all the muscles; is accompanied by the phenomena of asphyxia; lasts from one to five days; and terminates almost always fatally. 3. Anatomically, it consists in an apoplectic condition of the cerebro-spinal membranes, especially the spinal, and in visceral congestions due to the asphyxia. 4. Among the most probable predisposing causes may be mentioned the non-maturity, or imperfect development of the fœtus, while the action of cold, under its different varieties, is the determining cause. 5. The preventive treatment consists in adopting precautions against cold, and the curative in the employment of local bleeding, especially by cupping.—*Union Méd.*, 1862, No. 120.

Bony Deposit on the Arachnoid.—A man, aged 40, received a blow on the head with an axe, the edge of which penetrated to the dura mater. He died with all the symptoms of the severest encephalitis nine days after receiving the injury. There were found the signs of gangrenous inflammation of the brain and its membranes, but the abnormal condition of the arachnoid constitutes the chief interest of the case. This membrane was closely attached to the dura mater, but in place of its ordinary structure exhibited an osseous formation, which, like a tightly-fitting cap, covered the whole of the cerebrum nearly down to the basis, not only comprising two-thirds of the longitudinal and a part of the transverse sinus, but also sending down lamellar continuations between some of the convolutions. The structure, both surfaces of which were rough, unshining, and of the colour of recent bone, was, in most parts, above a line in thickness, although here and there were portions consisting only of tough membrane. The arachnoid at the base also exhibited bony plates in several places. It is evident that this deposit could not be the consequence of so recent an injury; and, on inquiry, it was found that in early childhood the man had suffered from what seemed acute disease of the brain. From this he gradually recovered, and continued quite well both in body and mind. We must conclude therefore, Dr. Spitzer, who reports the case, observes, that this rare new bony formation resulted from the metamorphosis of an exudation resulting many years before from inflammation of one or more of the membranes of the brain.—*Wien. Allgem. Med. Zeitung*, 1862, No. 40.

FOREIGN AND PROVINCIAL CORRESPONDENCE.

AMERICA.

Near Gettysburg, Pa., July 17.

Since my last communication to you was penned, the Surgeons of the Army of the Potomac have been kept somewhat busy; the army has since then marched northwards through northern Virginia, through Maryland, into Pennsylvania, fought the battle of Gettysburg, and is now again in sight of the river from which it derives its name. Of the march I have not much to say. On one day, half-a-dozen miles would be all we would get over. On another, fifteen, twenty, ay, even thirty weary miles were counted. At one time the sky would be clear—not a cloud in all the heavens to shield the soldier from the influence of the terrible rays thrown vertically on him by a Virginian summer sun—while the clouds of dust that marked the line of march nearly stifled him, panting as he already was from his own exertions and the oppressive heat. Many complaints were made to the Medical officers of faintness, giddiness, fluttering in the chest, and a feeling of an impending something, which something was a *coup*, more or less severe, which was sure to occur unless the man had a few minutes' rest in the shade, and an ounce or two of whisky, or in place of that a drachm of aromatic spirits of ammonia. Most of them adopt some precaution against sun-stroke—a havelock or handkerchief of white cloth or of silk, a handful of leaves in the cap, or wetting the head every half hour with a little water from the canteen. Again, the sky would be filled with cumulous clouds, every now and again the thunder rolling over head, and following closely the vivid pinkish flash, while the rain pours down in torrents, drenching the soldier to the skin, however tightly he may draw his rubber cloak around him, increasing so the load he has to carry by many pounds; the mud increases in quantity at every step; brooks innumerable, which previously had no existence, have to be crossed. Sandy particles get into the shoes, and chafe the feet, so that the poor fellows cannot say which is the lesser evil—heat and dust, or rain and mud.

It is most surprising how very few the cases were of disease developed on the march. Some of sun-stroke, and a few of febricula. The men who fell out of the line of march, and straggled behind, were simply footsore, or, if towards the end of a long or hurried march, exhausted.

The fighting in this vicinity, which has resulted so gloriously for the previously much vaunted and much maligned army of the Potomac, began upon July 1, the first and part of the eleventh corps having, unsupported, to bear the brunt of the day's battle, which ended in the death of Reynolds and the falling back of his troops to the hilly ground to the south of the little town of Gettysburg, leaving many of his wounded to fall into the hands of the enemy; who, however, three days subsequently, was obliged to abandon them on his retreat. On the evening of this day, by forced marching, most of Meade's army was concentrated at this place, and early on the following morning his dispositions were made. It was not, however, until some time after noon that the battle was resumed. The troops having been drawn up in line of battle, the Surgeons of divisions with their Hospital staffs proceeded to the rear of the lines in order to choose an eligible site and to prepare for the reception of the wounded. Our position was in the form of a triangle, two sides of which, formed of fighting men, were presented to the enemy, the area enclosed by them being covered with Hospitals, ambulance trains, and supply wagons. Unfortunately, however, the guns of the enemy commanded the whole of this triangular space, and, when the battle commenced, the Surgeons found it necessary to effect their speedy escape beyond the base. The first patient attended to in the Hospital to which your correspondent is attached was one of the attendants, who, in carrying a bucketful of water to an operating table, had two of his fingers torn off by a splinter of a shell. Everything was packed up speedily, and a general skedaddle of Surgeons took place; rather less than half a mile, however, placed us out of immediate danger, and, the tables being re-arranged, the work commenced. Half an hour after we were established, patients were not wanting,—hundreds lay around on the ground awaiting in patience their turn for attention, or moaning piteously for water or for the doctor. It grew dark. The Surgeons laboured earnestly. A pile of limbs was at the foot of every table, yet the number demanding attention increased. Sperm candles were lighted, and the work went on. A case is brought to the table. It is one where the necessity for operative interference is seen at a glance; where there are so many to pick amongst, it would be time lost to discuss ambiguous cases. Chloroform is rapidly administered to get over the excitant stage of its action, and the operator proceeds—and so during the whole of that night, without intermission, without remission, they laboured.

Just as the light of the new day began to render our candles useless, the storm of battle was resumed. Good news came into Hospital in the course of a few hours:—"The enemy have been repulsed in every assault. Our artillery is doing fearful service. Many prisoners are coming in." To a wounded man news of this kind is one of the best cordials that can be administered. The anxious expression of countenance wore off, jokes and laughs could be heard among them, and the heavy cannonading then going on, which elicited a short time previously such exclamations as "My God! is not that fearful?" brought forth now such remarks as "That's right, boys,—give it to 'em, pitch it in hot and heavy." I am not prepared to say that in many cases this alteration in the feelings of the wounded was not caused by patriotism,—by a pure feeling of joy at the success of their country's arms, but I am certain that the majority viewed the news of probable victory with a more selfish eye. If defeated, what had the wounded man to expect? His friends and comrades would fall back, and he probably be left behind to run the chances of lying on a battle ground while the fierce tide swept over it, and subsequently to fall into the hands of the enemy, who, with few supplies, and plenty of their own wounded to care for, would, could give but little time and attention to the preservation of his limb or life. Victory, on the contrary, afforded every chance that skilful Surgery and careful nursing could offer.

Shortly after this a battery was to be planted on an eminence in our neighbourhood, and we were ordered to remove our Hospital out of harm's way, since if the enemy should reply to it we would be in the line of fire. A second time we had to pack up, load the ambulance train, and move off to another location, well to the rear this time, since we carried with us most of the wounded that we had to expect from our division. The greater part of the day was lost in transporting them. A few operations only were performed at the new Hospital, when, darkness coming on, the Surgeons lay down to enjoy the repose of the wearied.

At daylight upon the 4th of July the labour was again resumed, and continued until the afternoon, when a heavy thunderstorm interrupted the proceedings until the fly of an hospital-tent was spread as a shelter to the operating-tables. During all this severe rain-storm the wounded lay as they had been set down from the ambulances. Most of them had one blanket to spread beneath them, and many had a second to cover them, for two or three ambulances had been out on the field solely to pick up blankets. The ground on which they lay was speedily converted into mud six inches deep, and there, imbued with mud, and blood, and filth of all sorts, they lay for half a dozen days—many of them at least—for some of those but slightly wounded, disgusted with their accommodations, went off to find their way to Baltimore or Philadelphia, intending to show their wounds as their passport. And a few Hospital-tents and flies were pitched to give shelter to the cases operated upon. Again, some small shelter-tents were picked off the field, and pitched over some of the wounded as they lay, but many—a great many—of the 800 Federal and 250 rebel wounded in this division Hospital lay so for five or six days, not one of which passed without heavy falls of rain. Their wounds, indeed, were kept clean, since there was no lack of stragglers to attend to them, and a small allowance of beef-tea and bread was given to each; yet, after no battle on the desolated soil of Virginia did the wounded suffer more than after the Gettysburg battle in Pennsylvania. This, due in part to the inclemency of the weather, was chiefly caused by the movements of the army in pursuit of the enemy. Five Surgeons were left behind with the wounded of a division as an operating staff; all the others had to follow their regiments, and all the supply-wagons had likewise to proceed with the army, because another great battle was imminent, and everything would be required. The Gettysburg wounded were left to the care of the country, and nobly did the country respond to the call; but it took time for the wants of the wounded to be known, and for them to be supplied. The immediate neighbourhood of the scene of conflict was unable to do anything, however charitably inclined, since the contending armies, previous to and after the fight, had used up everything eatable for miles around. A large force of volunteer and contract Surgeons was the first assistance that arrived, and, having had certain of the wounded placed under their charge, were soon made useful; but the lint, bandages, chloroform, left with us began to fail. What was to be done? We looked at each other in dismay, when, lo! relief was at hand. The supplies of all the different associations in the country poured in upon us *en masse*, and in a trice we found ourselves elevated from a state of destitution to one of luxury. Everything we could wish for the wounded was now at our disposal. We now had a sufficiency of dressing; we had blankets, shirts, drawers, socks, soft pillows for stumps to rest upon, fans to keep the flies away from those who had strength enough to use them, and mosquito-bars for those incapable of doing so. Food we now had fit for sick and wounded men, and brandy, wines, and fruits. Nor was even tobacco forgotten by these kindly associations. A number of ladies connected with them enliven our camps, and do more good as nurses each of them than a dozen men detailed for that purpose. The wounded, the Government, the country, can never sufficiently thank the Sanitary Commission, the Christian Commission, Adams' Express Hospital Corps, and the many other associations which transformed the scene of misery here to one of home-like comfort.

The rebel wounded in our charge have fared, so far as comforts and attention went, as our own men fared. Before our supplies came up they made no complaints, after their arrival they declared they had not had such a gay time since the Confederacy commenced to exist. The Surgeons, in bringing their cases to the table, never examined previously if a man wore blue pants or grey, but looked simply at the nature of the wound. Had they been within their own lines they could not have been so well attended to. I have seen now Confederate wounded in the hands of the Federals, and Federal wounded in the hands of the rebels, and I cannot but say that in acting the good Samaritan the north bears off the palm. At Chancellorsville battle the rebels removed their wounded to be cared for at Richmond, leaving the 1200 northern wounded to lie upon the field. The rebel soldiers near them gave them what help they could, but the rebel government did nothing—but confiscate the captured Surgeons' cases and Hospital knapsacks, looking upon them as Government property. On the misery being represented to those in authority, sugar, flour, bacon, and hard bread were plentifully issued to the wounded. This was all, they said, they could give, because it was all they had. Still, they could have done more; they could have removed these 1200 men to Richmond along with their own wounded, to fare as they fared; they could have sent a detail of Surgeons from their army at Fredericksburg to attend to them; and, from Richmond—only a couple of hours away by rail—straw, at least, might have been sent for them to lie upon. What would have been said had the Unionists acted similarly at Gettysburg?—had they removed their own wounded by rail, and left 10,000 rebels to lie upon the field with simply hard bread, bacon, sugar, and flour to sustain them, and with no Surgical assistance, save the dozen Medical men whom Lee sent over to take care of them? Had this been done, God help the Yankees! we would never have heard the end of it.

At this date those who remain in Hospital are chiefly cases operated upon, most of the others have been removed. Almost all the operative Surgery has been performed, and we, who were left behind, are now daily in expectation of orders to rejoin our commands. I hurriedly send this communication to you now, because, were I to postpone it until I should be more favoured with leisure, I might have to wait until after next battle, when Gettysburg would have become a thing of the past.

Concerning the Surgery of this battle, I have to say that conservatism entered largely into its elements. Shoulders, elbows, inches of the radius, ulna, and fibula I have seen resected, but in no instance has resection been resorted to in the case of the femur; the fatal result of this operation, when well tried at Antietum and Fredericksburg has prevented any further attempts now. Amputation has been the rule in the middle and lower thirds; no operation in the higher fractures. These last have been doing well up to this date; how they will ultimately succeed is an interesting question for the future to solve. The continued rainy weather that we have had has, by depressing the system, induced a tendency to sloughing in many of the stumps, to obviate which a little whisky or turpentine has been added to the water-dressing. An under-average of deaths after operation from inefficient reaction, a few cases of secondary hæmorrhage, and two or three cases of tetanus, have been the accidents occurring among us subsequent to operation. Two cases of amputation were performed after the occurrence of spasm of the muscles of deglutition; one has since died of tetanus; the other was alive thirty-six hours after operation (that is just now), and had then no tetanic symptoms.

A great many very interesting cases of gun-shot injury have been recorded at this battle, and a large number of preparations have been preserved and sent to Washington. A Surgery of the American war will, when it appears, be a book worth studying, if its author merely copies *verbatim* from the records of the various Hospitals.

In conclusion, just now I may mention that though I have seen chloroform administered many a time and oft, yet it was never my fortune to see any approach to a *mesaventure* until lately, and the fault then lay with a careless administrator, not with the anæsthetic. Artificial respiration was put in practice, and, in five minutes, the pulse, previously imperceptible, was felt to beat gently at long and irregular intervals, and natural breathing was found to be re-established. The patient has since done well.

SCOTLAND.

Edinburgh, July, 1863.

The Vaccination Bill for Scotland has been engrossing all our attention for a fortnight. The bill was concocted under the auspices of the Town Council, and was little more than a *réchauffé* of the inoperative English Act, with some additional clauses, borrowed from a pamphlet published two or three years ago by Dr. Alexander Wood.

In the concoction of the measure the College of Surgeons had a conspicuous part; the College of Physicians at first held aloof, but ultimately opposed the principles of the measure.

The report, containing their opposition and the grounds of it, was forwarded to the officials in Edinburgh, and (by some mistake, I presume) was arrested there, and got no further, so that it had no effect in influencing those by whom the measure was prepared. At this Dr. Alexander Wood waxed exceeding wroth, and denounced the unhappy Officer of Health, as the author of the neglect, in no measured terms, at the indignation meeting which I referred to in my last. The cause of the Officer of Health has been supported by the Town Council, who have published a minute, acquitting their officials and condemning Dr. Wood. Against this decision *in absentiâ*, Dr. Wood has reclaimed in a severe letter, giving certain dates which bear out his complaint. In reply to this, nothing has yet appeared but a grossly personal attack on Dr. Wood from the Town Council. Dr. Wood has more to do than notice their stupidities. When eminent Medical men, at the loss of time and money, work for the public good, they take very quietly the splashes of annoyance the circumstances of the case expose them to.

It shows, however, the value of our Colleges as representative institutions, and how much more their sympathies are with the great body of the Profession than is the case in England, that the College of Physicians of Edinburgh, in conjunction with the Faculty of Physicians, unaided by any public body, succeeded in securing most important modifications of the Bill.

I believe that in England you complain greatly of the public vaccinators being in league with the Registrars of Births and using their official position as an introduction to private practice. In Scotland we have changed all that. The very name of public vaccinator is limited to the vaccination of paupers. The College have also introduced the sensible provision that, instead of fining or imprisoning a man for not getting his child vaccinated, you simply send some one to perform the operation, and only punish him if he resist such friendly interference. I hear the College of Surgeons have seen their error in supporting the original Bill; but the College of Physicians had accomplished all before any move was made on the part of the Surgeons.

The University College Hall Company has been formally constituted at a meeting, of which Dr. Laycock was Chairman. Your correspondent has more than once alluded to the great need for such accommodation, and he hopes that before next winter session the hall will be growing as rapidly as the Industrial Museum and new post-office are shooting up now their stately columns of freestone and red granite. The former edifice threatens to eclipse the dull grey mass of the University.

At an extraordinary meeting of the Medico-Chirurgical Society, Dr. Thomas Keith read a compact and well-expressed paper on ovariotomy, giving the results of six cases. They were all cases of severe ovarian disease. They were of the following weights:—

The first was 25 lbs. with 2 gallons of ascitic fluid outside.

The second, 45 lbs.

The third, 63 lbs. 9 oz.

The fourth, 33 lbs. 2 oz.

The fifth, 120 pounds; in this case the distance between the ensiform cartilage and pubis was 37 inches. Upwards of 60 at the umbilicus, and as she reclined in bed the umbilicus rested between the heads of the tibiæ.

The sixth case was not weighed; but there were collected 3 gallons of fluid besides the solid; it was probably 35 lbs.

To you in London the operation and subject are stale, to us they are not. The last case brought before the Society was one by Edwards, six years ago. Then every one was against the operation, now every one is for it. Dr. Mathews Duncan said on this occasion that his mind could not conceive the possibility of successful ovariotomy, until Dr. Keith, who lives in his immediate neighbourhood, had "*brought it to his own door;*" all the cases of Clay, Brown, Wells, etc., had not entered his imperturbable and impassive mind. Dr. Keith's 120-pounder had to be rolled up against his door in Charlotte-square, before the portals of that stolid imagination would open to a recognised fact. But we do not believe Dr. Duncan has such *parochial* ideas on Professional subjects. However, in the meanwhile the question of operating here being doubtful, there never having been a successful case in Scotland, except one done by an Englishman in Aberdeen. The one Keith quoted to his brother the words of a late eminent countrywoman, who lived at Cawdor,—"*We* fail! Screw your courage to the sticking place, and we'll *not* fail. . *When Duncan is asleep.* When in (chloroform) their drenched natures lie as in a death, what cannot *you* and *I* perform upon?"—*Macbeth*, act i., scene 7.

Professor Simpson got up, and as usual gave the Society an elaborate statement of precedents, statistics, and experience, linked in a chain of the compactest reasoning, glittering with the light of his peculiar genius.

Handyside told of a successful case, which, however, is, from some modesty on his part, recorded as a fatal case. Edwards described three cases he had operated upon, and gave reasons for the results.

> "ὣς φατο· τοὺς δ'ἤδη κάτεχε φυαί ζοος αἶα,
> 'εν Λακεδάιμονι αυθι, φίλῃ ἐνὶ πατρίδιγαίῃ."
>
> "So spoke he, but they long since in Earth's soft arms were reposing.
> Here, in their own dear land, the father-land, Lacedæmon."

The Session is now over, and washerwomen sprawl about, and mops twirl in the classic groves of Nicholson-street; but still at the Infirmary is affixed day after day that an operation is to take place, and those sensible persons who prefer the air of wards to that of the country may study almost every variety of disease in this huge Hospital. But they may have both; they may study all sorts of maladies, or cut up any number of subjects in the forenoon, and then climb the Pentlands, sail on the Frith, hunt for fossils in the lime caves at Wardie, or lounge in the Princes-street Gardens, where, to all intents and purposes, they are out of town, the only nuisances being, to quote Mr. Robins, the song of the blackbirds, the scarcely less musical laugh of children, and an occasional bugle-call from high above, upon the Castle hill.

There have just been let loose eighty Medical graduates from our University. Professor Playfair delivered an appropriate address on the occasion. How the mouths of the Army Medical authorities must water for a few of those fine young men, five feet eight inches high in intellect, wanted for Her Majesty's service, both naval and military. There is no doubt but that the monotonous routine of the Army and Navy Medical service tends to make it unpopular. A Naval Surgeon told me of a grievance the other night that I had not heard of before, viz., that when a R.N. Surgeon is sent to do duty on shore with marines, he is not allowed forage for a horse like his Army brother, even should his duty require him to keep one. The authorities probably are afraid of calling into being that bogie, a horse marine.

GENERAL CORRESPONDENCE.

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NON-PAYMENT OF MEDICAL FEES FOR ATTENDANCE ON PREMATURE LABOURS—DECISION OF THE POOR-LAW BOARD.

LETTER FROM DR. LINNINGTON ASH.

[To the Editor of the Medical Times and Gazette.]

SIR,—I beg the insertion in your Journal of the accompanying correspondence, because I do not remember to have ever seen the point at issue so clearly defined or so conclusively determined as in this instance. The decision of the Poor-Law Board, although adverse to myself, and in my opinion a wrong one, I am bound to consider final; but the publication of the following letters possibly may induce such remarks from our Professional brethren as may ventilate the subject, and lead to a better result for us in future.

I am, &c. LINNINGTON ASH.

Holsworthy, Devon, July 29, 1863.

"Holsworthy, July 16, 1863.

"My Lords and Gentlemen,—The guardians of this Union have disallowed two items in my bill of extras for Medical attendance on two cases of premature labour, on the ground of doubt whether they come under the intention of the 182nd art. of the Consolidated Order which relates to the payments of Medical Officers on cases of "child-birth," and it has been mutually determined to submit to the decision of your Board, which shall be final. As I am quite satisfied with the way in which the case has been proposed to you by Mr. Braund, I will not recapitulate the facts, and merely wish to suggest that the order attempts no distinction between cases premature or mature, viable or not viable, live or still-born; and moreover it is well known that cases of premature labour are often more difficult of treatment, more serious to the patient, and of greater responsibility, delay, and trouble to the Medical man than ordinary cases of labour. I have only to add that I have on a previous occasion been paid by our Board for a similar case, and consequently that I am jealous of a departure from such a precedent, and can submit to it only when it can be clearly shown to be irregular or illegal.

"I have the honour to remain,
"My Lords and Gentlemen,
"Your obedient servant,
"Poor-Law Board, London. "LINNINGTON ASH."

"Holsworthy, June 16, 1863.

"My Lords and Gentlemen,—I am directed by the Board of Guardians of this Union to report that Dr. Ash, the Medical Officer of the 5th district in this Union, claims to be paid, under article 182 of the Consolidated Order, dated July 26, 1847, for his attendance on Mary Hancock and Ann Croker, two women prematurely confined, a fee of 10s. in each case. It appears that neither woman was more than five months advanced in pregnancy. Under these circumstances, the Board will feel obliged to be informed whether in these cases, as well as in all cases of premature birth, a Medical officer is entitled to be paid the above fee the same as if he attended 'any woman in or immediately after child-birth.'

"I am, &c. "GEO. BRAUND, Clerk.
"Poor-Law Board, London."

"Poor-law Board, Whitehall, S.W., July 21, 1863.

"Sir,—I am directed by the Poor-law Board to transmit for your information the accompanying copy of a letter which the Board have addressed this day to the guardians of the Holsworthy Union, respecting your claim as Medical officer of the fifth district to midwifery fees in the case of two poor women, named Mary Hancock and Ann Croker.

"I am, Sir, your obedient servant,
"H. FLEMING, Secretary.
"L. Ash, Esq., M.D., Medical officer, Holsworthy."

"Poor-law Board, Whitehall, S.W., July 21, 1863.

"Sir,—I am directed by the Poor-law Board to acknowledge the receipt of your letter of the 16th instant, in reference to the claim which has been made by Dr. Ash, the Medical officer for the fifth district of the Holsworthy Union to the midwifery fees prescribed by Article 182 of the Consolidated Order for his attendance in the cases of Mary Hancock and Ann Croker.

"I am directed to state *generally* (the italics are ours) that the midwifery fee prescribed by the regulations is for the delivery of a woman in *childbirth*, and that the Board consider that the term *childbirth* only applies to a case in which the child was or might have been born alive.

"I am, Sir, your obedient servant,
"H. FLEMING, Secretary.
"George Braund, Esq., Clerk to the Guardians of the
"Holsworthy Union, Holsworthy."

ECZEMA AND PARASITIC GROWTHS.

LETTER FROM MR. JABEZ HOGG.

[To the Editor of the Medical Times and Gazette.]

SIR,—I must beg of you to indulge me with a small space in your next Journal to correct a misstatement of my views on the parasitic growths in skin diseases.

Dr. McCall Anderson, in his lecture on Eczema, at page 87, gives the particulars of a case which came under his notice, he then makes the following remarks:—"Mr. Jabez Hogg, who professes to find parasitic growths in all skin diseases, would probably have made use of this case in support of his views, etc." I have never *professed* anything of the kind, neither have I any *views to support* with reference to skin diseases, and I believe if Dr. Anderson will do me the favour to turn to my paper published in detail in the *Quarterly Journal of Microscopical Science*, vol. vii., p. 39, 1859, he will come to a very different conclusion. He will there find that my investigations were undertaken for the purpose of searching after the truth; and if I differ from other investigators, I feel certain I am not further from the object I had in view than those who went before or came after me in the same field of inquiry. I do not believe my views are freer from objections than those of other persons; but this I maintain, that they were honestly undertaken, and that I correctly interpreted what I saw under the microscope. In most instances my examinations were verified by other observers; and in every case my specimens were most carefully selected for me by a gentleman of whose competency for the task there can be no question. I refer to Thomas Hunt, Esq., F.R.C.S., the author of an excellent treatise on skin diseases, and that when any doubt presented itself the specimen was at once rejected. I trust therefore I have made it clear to your readers that an error of the kind noted by Dr. Anderson was not only carefully guarded against, but simply impossible during my investigations. I am, &c.

1, Bedford-square, July 29. Jabez Hogg.

MR. TOYNBEE'S DISSECTIONS OF THE EAR.

[To the Editor of the Medical Times and Gazette.]

Sir,—Your Number of July 25 contains a letter from Dr. Kramer objecting to the review of his recent book upon the ear which has appeared in your columns. I must leave it to your readers to decide whether in that review the facts to which Dr. Kramer refers have not received their due weight. I venture to request a space in your columns, not for self-defence, but in order that a matter of fact may not pass misrepresented. Speaking of Mr. Toynbee's dissections of the ear, Dr. Kramer says—and he has, I believe, made the assertion before—that Mr. Toynbee "has not examined one of these patients during life." It may be a sufficient answer to this statement to say that in the classification of the specimens enumerated in the Catalogue of his Museum, published by Mr. Toynbee, 272 are stated to belong to deaf persons whose histories are known. And from the paper published by him in the thirty-eighth volume of the *Medico-Chirurgical Transactions*, it appears that of these 136 had been examined by himself during life. On looking over the pages of the catalogue, I find that among the first 200 specimens sixteen are accompanied with such condensed histories as are suited to the place; and besides these there are various other preparations of which it is stated in general terms that the subject was known to have been deaf. Under these circumstances, as I cannot understand, so I do not seek to explain, Dr. Kramer's statement. I am, &c.

The Reviewer.

MEDICAL NEWS.

◆

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary Examinations for the Diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 30th ult.:—

John Craven Robinson, Scarborough; John Loane, Dock-street, Whitechapel; Alfred George Snewin, Thornhill-square; Frederick Bond Eaton, Lansdown-road, Notting-hill; Edward Hyde, Witney, Oxon; Samuel Morton, Sheffield; Christopher John Weis, M.B., Trinity College, Dublin; George Oliver, Stockton-on-Tees; John Amos Woodhams, Lambeshurst, Kent; John Betts, Norwich; James Cooke, Stretford, near Manchester; Joseph Moorhead, Clones, Co. Monaghan; William Hopkin Thomas, Maesteg, Glamorganshire; Edward James Pollock, Hatton, Hounslow; John Trible, Torrington, Devon; Frederick Stubbings Taylor, Greenwich; George Eugene Yarrow, L.S.A., Central-street, Old-street; Hugh Taylor, Norwich; Francis Vincent Hogan, Dartford; John Henry Edwards, Llangefrie, Anglesea; Francis William Slow Wicksteed, L S A., Maidstone; William Henry Fleetwood Buckle, M.D. St. Andrews, L.R.C.P. Lond., Royal Mint; Philip Sheldon Fentem, Egham, near Sheffield; Shephard Thos. Taylor, L.R.C.P. Lond., Dilsham, Norfolk; Charles Holman Parks, St. Columb, Cornwall; and James Gerhard Reid, Cape of Good Hope.

Naval Surgeons.—The following Members of the Royal College of Surgeons of England passed their Examinations for Full Surgeons in the Royal Navy during the past week:—

Dr. Francis Hunt Richardson, of H.M S *Majestic*, Liverpool, diploma of membership dated April 13, 1857; Dr. Thomas Cann, of H.M.S. *Recruit*, Chatham, April 11, 1859; Mr. Richard Charles Pasley Lawrenson, of the Royal Naval Hospital, Plymouth, December 12, 1856; and Mr. Samuel Grose, of H.M.S. *Dauntless*, Southampton, April 11, 1859.

Admitted on the 31st ult.:—

George Thomas Albert Staff, Barnes; Sylvester Richmond, Hornsey; John Rigg, Southport; John Kendrick Wyune, Oswestry; Augustus Werry, Smyrna; Isaac Thomas Bridgman, Berkeley, Gloucestershire; Carey Pearce Coombs, L S.A., Frome, Somerset; Miller Montgomery Moore, Buckstone; Edward Robt. Bradley Reynolds, Islington; Frederick Steell, M.D. Univ. Edin., Edinburgh; Frederick Arthur Best, Bilston; Charles Edward Caudle, L.S.A., Henfield, Sussex; Cuthbert Robt. Kendal, Gateshead; Thomas Mason Johnson, M.D. St. Andrews, L.S.A., Manchester; Chauncey Puzey, Surrey-square, Old Kent-road; Francis Furlong Searle, Exeter; James Smith Harris, St John's-wood; Henry John Ryder Bush, Devonport; Edward Harris Ruddock, Woolwich: Henry Kettle, Tipton; William Henry Hobson, L.S.A., Long Sutton; and John Holden, Manchester.

Admitted on the 1st inst.:—

Charles Owen Aspray, M.D. St. Andrews, L.S.A., Newton-road, W.; Frederick Hendebourck Gervis, Tiverton; Hector Grahame Henderson, London; William Henry Day, Wakefield; Arthur David Jardine, Chatham; Edwin Roberts, St. John's-wood; James Hanna, New Zealand; Gawin Orr, Belfast; Hubert Wilson, South Sturton, Greenwich; Richard Carter, Newbury; Edward Steven Thomas, Birmingham; George Wyatt Sharp, L.S.A., Great Cumberland-street, Hyde-park; George Richard Turner Phillips, Bayswater; and Edward Brown, Reading.

The following Members of the College, having undergone the necessary Examinations, were admitted Licentiates in Midwifery, at a meeting of the Board, on the 5th inst.:—

George William Noad, Wokingham, Berkshire, diploma of membership dated August 1, 1862; Richard Wagstaff Smith, Handsworth, November 13, 1860; Christopher Montgomerie Davenport Davidson, Wandsworth-road, January 29, 1861; Alexander Tertius Carson, Coleraine, November 12, 1861; Richard William Davies, Colnbrook, Bucks, November 18, 1862; Robert Sidney Stone, Bath, January 21, 1863; Sidney Rossell Henson, Hull, April 22, 1863; Frederick Gordon Brown, Finsbury-circus, April 23, 1863; Thomas Longston, Hulme, Manchester, May 20, 1863; George Eugene Yarrow, Central-street, E.C., July 30, 1863; Henry Law Kempthorne, King's College Hospital, May 20, 1863.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Barnes, T. H., M.D., has been appointed House-Surgeon to the Dispensary, Newark-on-Trent.

Edmundson, J., M.D., has been appointed Assistant-Resident Medical Officer to the Clonmel Auxiliary District Lunatic Asylum.

Hardie, Thomas, M.D., has been appointed one of the Medical Officers to the Leith Hospital and Dispensary.

Heginbothom, Edmund, M.D. St And., has been elected Medical Officer of the Bruton District of the Wincanton Union.

Jervis, Thomas, M.D. St. And., has been appointed a Justice of the Peace for the County of Middlesex, and the City and Liberty of Westminster.

Jordan, T. F., M.R.C.S. Eng., has been appointed Surgeon to the Queen's Hospital, Birmingham.

Martyn, Samuel, M.D. Edin., has been re-elected Physician to the Bristol General Hospital.

Newman, A. J., M.R.C.S. Eng., has been appointed House-Surgeon to the North Devon Infirmary, Barnstaple.

Smith, John, M.D. Edin., has been appointed Dental Surgeon to the Royal Infirmary, Edinburgh.

Taylor, G., M.D., has been appointed Surgeon to attend to Physicians' cases at the Derbyshire General Infirmary.

Thomson, Robert Dundas, M.D. Glasg., has been elected President of the Metropolitan Association of Medical Officers of Health.

Thorowgood, John C., M.D. Lond., M.R.C.S., M. and L.S.A., has been appointed Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

White, T. C., M.R.C.S. Eng., has been appointed Hon. Surgeon-Dentist to the Royal Pimlico Dispensary.

DEATHS.

Bagster, William, Surgeon, at 8, Cornwall Villas, Kentish Town, on August 3, aged 83.

Bennett, Joseph, M.R.C.S. Eng., at Wakefield, Yorkshire, on July 28, aged 71.

Bird, Thomas, L.S.A., at Guisborough, Cleveland, Yorkshire, on July 14, aged 60.

Glen, John, M.D. Edin., at the Royal Infirmary, Dundee, on July 24.

Griffin, Daniel, M.D. Glasg., at George-street, Limerick, on July 31.

Griffith, Wm. Tyndal, Surgeon, of 35, Ely-place, Holborn, at Bangor, North Wales, on July 26, aged 28.

Norris, Thomas, M.D., formerly of Chester, at Weybridge, on July 29, aged 75

Ogilvie, William Mackay, M.R.C.S. Eng., Surgeon R.N., at Boughton, Blean, near Faversham, Kent, on July 31, aged 37.

White, Charles William, Surgeon R.N., at Clarence House, Southsea, on July 31, aged 56.

Workman, Octavius, Surgeon, formerly of Heckfield, at Basingstoke, Hants, on August 2, aged 63.

St. Bartholomew's Hospital and College.—Scholarships have been awarded to the following gentlemen at the close of the winter and summer examinations:—S. Hall, H. Mackintosh, F. W. Richards, L. Powell, F. Bateman, J. Robinson, T. Cuddeford.

Generous Medical Bequest.—Count Angiolli Galli, a Florentine Practitioner who recently died, has left the whole of his property, valued at about four million francs, to the Hospitals of Tuscany.

University College, London.—On Saturday, the last Session of the Academical year 1862-63, the Council, in compliance with a recommendation, long since contemplated, of the Medical Committee of the Hospital, conferred on Mr. Henry Thompson, in consideration of long and valuable service as Assistant-Surgeon, the title of Surgeon to the Hospital. The appointment of another Assistant-Surgeon was resolved on, and directions were given for taking the usual steps towards procuring candidates for the office by the beginning of the next Session, in October.

Collegiate Election.—The number of Fellows who recently attended to record their votes for the vacant seats in the Council of the Royal College of Surgeons amounted to 312, of which number no less than 71 attended from the provinces, and many from a considerable distance, as Manchester, Salisbury, Exeter, etc. This is a considerable increase over the number of preceding years, and will be considerably augmented next year, when Mr. Turner, of Manchester, offers himself.

Apothecaries' Hall of Ireland.—At the annual meeting of the General Council held, pursuant to Act of Parliament, on Saturday, the 1st inst., the following were duly elected for the ensuing year:—*Governor*—Thomas Collins. *Deputy-Governor*—Robert Mulock. *Court of Directors and Examiners*—Arthur Harvey, Charles Holmes, Charles Henry Leet, William Madden, sen., William Madden, jun., Robert Montgomery, Henry P. Nolan, Jerome O'Flaherty, George B. Owens, Christopher Shaw, John Shea, John L. White, and George Wyse. *Examiners in Arts*—George Atkinson and William D. Moore.

Dr. Laycock's Class of Medical Psychology and Mental Diseases, University of Edinburgh.—Questions at the examinations held July, 1863, for certificates of proficiency, propounded conjointly by the Commissioners in Lunacy for Scotland and Dr. Laycock:—1. Give a synopsis and description of the different forms of mania. 2. State the physiognomical aspect, symptoms, and treatment of acute melancholia. 3. Discriminate between illusions, hallucinations, and delusions, and illustrate by examples. 4. What are the most common cerebral lesions found after death from general paralysis? 5. When may insanity be regarded as incurable? 6. Under what conditions would you feed the insane artificially? Describe the processes followed, and state the reasons for preferring any particular process. 7. What results may be expected to follow from the efforts now being made for the education of idiots and imbeciles? 8. State how a Practitioner should proceed in diagnosing the mental condition of a person presumed to be insane, and what precautions are needed in forming and expressing an opinion? 9. A clinical report on a case examined by the candidate at an asylum.

New Act to Seize Unwholesome Meat.—On Saturday an important Act of Parliament was printed to amend the Nuisances Removal Act of England, 1855, with respect to the seizure of diseased and unwholesome meat. The Act is now in force, and a Medical Officer of Health or Inspector of Nuisances may inspect and examine any animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetable, corn, bread, or flour exposed for sale, or deposited for the purpose of sale or preparation, and intended for the food of man; and in case either appear to him to be diseased, unsound, or unwholesome, or unfit for food, to seize and take it away, and to have the same dealt with by a magistrate, who, on conviction, may fine the offender a sum not exceeding £20, or commit him to prison for three months. Any person obstructing the Medical Officer or Inspector is liable to a fine of £5. The meat so seized is to be destroyed.

Never too Late to Mend.—The proprietors of Sir W. Burnett's disinfecting fluid have announced, in a letter to *The Times*, that for the last month none of the fluid has been sent out from their factory without "a coloured label with the word 'Poison' in conspicuous letters on the bottles." They further add, "that for some time past the fluid has been sold only in 'fluted bottles,' and, as a further precaution, we have obtained a coloured bottle, so as to prevent the possibility of its being mistaken for fluid magnesia, etc. Of course, as a considerable quantity is in the hands of the retail dealers, it is very difficult to carry out these precautions immediately, but we would venture to suggest to all such persons the propriety of fixing a poison label on all the bottles they may sell, and we shall, on application, be glad to supply such labels without charge." It is a pity that these precautions had not been adopted on the occurrence of the first case of accidental poisoning through mistaking the fluid for Dinneford's solution of magnesia. It is believed that more than twenty cases of poisoning, many of them fatal, have resulted from the unfortunate similarity of the bottles.

Death of Daniel Griffin, Esq., M.D., Limerick.—The last surviving brother but one of the immortal Gerald Griffin, Dr. Daniel Griffin, is no more. He died last night at his residence in George-street, after nearly a fortnight's illness, of fever, contracted in the discharge of his Professional duties, to which no man that ever lived could, we believe, devote more anxious attention, and to which few, if any, could dedicate more thorough Professional skill and experience. Consigned to his care, the patient underwent at the very outset the closest and most deliberate examination of his ailment; and, never adjudged with offhand assumption, was treated by Dr. Griffin with continuous regard, as well to the origin as the alternations of his malady, and watched with the ever-friendly personal interest that manifested the natural dispositions of the eminent Physician whose unexpected death we deplore. In his hands the parent knew that the life of his beloved child was as safe as mortal skill and man's generous kindness could assure; and in his commanding knowledge of every species of infirmity, in especial of those beyond the class of what may be called coarse distempers, the friend or relative felt that the patient had, in the attendance of Dr. Griffin, all the hope of health and life that reason could form or affection indulge. A clearer head, a warmer heart, a loftier or less selfish spirit, belonged, we believe, to no man of our time; and a loss greater to society and life could not, however distinguished the ability and great the acquirements of the Medical body, befall this and the other communities with which the extensive practice of the respected, loved and able Physician, widening every day, was connected. Few knew the large number of critical and dangerous cases of constitutional as well as of other kinds to which he was called, or how often from distances he was summoned to rescue precious life from decay. Of no very muscular frame from childhood himself, he still, fortified by his own knowledge, was able to accomplish heavy Professional work, and to strengthen others of delicate organisation in their resistance to deep-seated affections, or their endurance of otherwise over-mastering toil. Of Dr. Griffin's attachment to the fame and fortunes of his native land some evidence has been given. The brother of Gerald Griffin could not want a share of his sympathy with the people. He had all the congenial congenital warmth; and he was, we are sure, amongst those who would assert for this realm its right, under the recognised Sovereign, to the legislative self-rule deprived of which it is wronged, shamed, and beggared. Of his literary attainments, the life of his brother, the pages of which his fraternal love filled, is lasting evidence; of his charity, his untiring labour as an active member of the Society of St. Vincent of Paul was a proof; and of his Irish feeling and independence, his promotion of the memorial to Sarsfield—and his disapproval of too complaisant gratulations to verbose officials, were evidences which the public recognised and approved. Doctor Griffin has left a widow and young family, the elder of whom is, however, a young gentleman now attaining the years of manhood, and likely to be an honour to the name he bears and the Profession he may be deemed to inherit.—*Munster News.*

Damages for the Winchburgh Collision.—Several cases have been tried within the last few days in the Jury Court at Edinburgh for the settlement of claims for compensation for personal losses or injuries sustained through the accident at Winchburgh in October last. The first case tried was that of Mrs. Hedderwick, mother of the late Mr. Alexander Hedderwick, writer, Falkirk, who was killed in the collision. The pursuer claimed £3000, and was awarded £1,750 for the loss of her son. Mr. Elder, commercial traveller, who sustained injuries on the head, face, chest, and legs, which for a long period endangered his life, and which to appearance had permanently impaired his health, was offered £1,500 by the railway company, being half the amount of his claim; he was awarded £1,800 by the jury. Mrs. Gibb, wife of Mr. Gibb, commission agent, was so injured by the accident of the 13th of October that, being pregnant at the time, she gave birth to a still-born child on the 22nd of November; she asked £1000 damages, but while the trial was proceeding agreed to take £250, with £150 for law expenses. Mr. James Shaw, writer, Falkirk, clerk to the late Mr. Hedderwick, claimed £6000 damages for the constitutional injuries he sustained and the loss of his professional prospects. The railway company offered him £2000 by way of compromise, which he declined to accept. On the trial of his case on Wednesday he was unable to appear, and his evidence, which had been taken by commission some days before, was read. The jury awarded him £2000, the amount of the tender. Next day the unfortunate young man, whose health had been giving way since his examination, died, his death being the twentieth that has resulted from this dreadful railway catastrophe. Mr. Welsh, tailor and clothier, Edinburgh, claimed £5000 for personal injury, protracted sufferings, and loss of trade; and, after a lengthened trial, the jury gave him £3000. Mr. Macnab, wool merchant, Cupar, Fifeshire, was offered £2000, which sum, to save the excitement of a trial, he accepted.

Low *v.* Elliott.—This was a case tried before Mr. Justice Mellor, at Carlisle, on August 1. As an illustration of the amenities of Professional life in an English cathedral town in the middle of the nineteenth century, we think it unique. The plaintiff, a dentist practising at Carlisle, brought an action against Dr. Elliott of that place for slander. The defendant and plaintiff lived next door to each other in Lowther-street. It appeared that, being neighbours, they had a quarrel and a lawsuit about a party wall, which action was going on in June last year. During that month the plaintiff had a friend and relative from India named Thomas John Lloyd Richards staying at his house in ill health, who died at his house of heart disease, and at the plaintiff's request a post-mortem examination was had on him, and on the afternoon of June 3 his remains were quietly removed in a hearse to the railway-station at Carlisle to go to Penrith, where his father lived, at his father's request. A day or two before this event the defendant had had a conversation with a lady named Shaw, who had stated to him that she had heard that a young lady had died at Mr. Low's, the dentist, while under the influence of chloroform. The defendant had replied that it was very extraordinary if so, as he had heard nothing about it, living next-door neighbour. On the afternoon of June 3 last year, and after this conversation, Dr. Elliott was looking out of his widow, and saw a hearse with one horse come to the plaintiff's door and have a coffin, which was brought out of the plaintiff's house, placed in it. He immediately appeared to have come to the conclusion that this coffin contained the body of the young lady who had taken chloroform, and that it was being surreptitiously removed. He thereupon, being a magistrate and deputy-mayor of the borough, followed the hearse to the railway-station, where he saw the coffin on the platform, and then placed in a horsebox. He thereupon conversed with the guard of the train about it, told the story he had heard from Mrs. Shaw, said it was a remarkable coincidence that he should that day see the coffin removed, wished to see the plate upon it, and read (as one of the witnesses said,—Mr. Hall, the Medical man who had attended the deceased) in an "oracular" manner aloud to the crowd, which was then gathering round him on the platform, "John Thomas Lloyd Richards, aged twenty-four," and wondered if the coffin contained a young lady. He further said, in conversation with various witnesses called, that "he was afraid it was a bad case," that it was the body of a young lady who had died under the administration of chloroform at Mr. Low's, and it was being surreptitiously removed. Mr. Hall stated to the railway officials what the case was, and that the coffin contained the remains of a patient of his who had died from natural causes, and also stated the same to a policeman who was sent for, and it was pointed out that the young man's death was in the local newspaper of that day. The defendant, however, still seemed to have talked of the extraordinary coincidence and about the case. A few days after he was written to by the plaintiff's attorney demanding a retractation of his slander and an apology, to which the defendant replied that he was not aware that he had anything to apologise for. The present action was then commenced. The plaintiff proved that in consequence of the circulation of this story his chloroform patients had fallen off from about fifty a year to six or seven, and that his general business as a dentist had fallen off £1000 a year. His practice had formerly been worth £2300 a year, and it was less now by £1000 a year. The defence urged was that the defendant had acted *bonâ fide* and without malice. The jury found a verdict for the plaintiff—Damages, £100.

The Hospitals of Vicksburg.—The following is an extract from a private letter, dated Vicksburg, July 9, 1863, from a Medical officer of high rank in the Federal army:—"'They' (the Confederate sick and wounded) 'have none of the comforts, and very few of the necessaries of life; they have scarcely any medicines, and no food but fat pork and corn meal to give their sick.' This was the account given to me by the Federal Surgeon put in charge of the Hospitals since the capture of the place. He had just made his first round of inspection, and, being a humane man, was busying himself in trying to obtain supplies to meet their most pressing wants. In this, that most useful institution, the 'Sanitary Commission,' was helping him. But the chief thing to be done, as he said, is to get them out of these places, in which filth reigns undisturbed, to some airy place outside the city, without loss of time. The sick and wounded in the city number 6000; and most of these are distributed in small and unsuitable buildings, in squads of from 60 to 100 men each, so that proper supervision is impossible. They must be put into one or more large camps, under tents or sheds made of boughs, and well doctored and fed, otherwise three-fourths of them will die. The state of filth in which the Hospitals have been allowed for the most part to remain is only paralleled by the personal uncleanness of those engaged about them. Not to multiply instances,—in one large Hospital the Federal Inspector found a large tub standing in the middle of the hall, which, to his surprise and disgust, was found to be nearly full of human excrement. The steward, on being summoned, appeared also surprised at the remonstrances addressed to him, as that mode of proceeding did not appear to him unusual or objectionable. Various stories are current as to the amount of starvation undergone by the garrison. One commissary asserted that he only issued twelve daily rations in forty-eight days, *i.e.*, that the men were on quarter rations; and that whatever else they got to eat they bought or pillaged. But this cannot have been the case generally. There is no doubt, however, that they ate mules, *alias* Confederate beef. I have a copy of the *Vicksburg Citizen*, of June 2, printed on the blank side of a piece of wall-paper, about a foot square, in which the editor sings the praises of mule-steak, asserting it to be tender, savoury, and everything else that is desirable. Truly, hunger is the best sauce! But a captive sergeant told me that the mule-beef did not go down well with the majority; for his part, he believed it was consumed chiefly by the epicures. The hippophagists of Paris are clearly outdone by the hemionophagists of Vicksburg. Many lives were lost in the Hospitals, as in the rest of the town, by the explosion of shells; but the most fatal weapon here, as everywhere, has been the rifle. Stray bullets, fired at an elevation from below the fortifications, and passing over them, have killed many an unfortunate within the city at a distance of nearly a mile. This fire was incessant, while that of the shells was only occasional. The caves and holes in which the people sought shelter have a strange effect; as if the tendency of war was to bring men back to the state of wild beasts. Every other house at least has a shot or shell through it; some, four or five. Twenty or thirty houses are burnt. The 'smartest' thing that I have yet heard of was a trick played by a youth towards the end of the siege. Having found a dead rat, and determined to make something of him, he skinned and skilfully cooked him, and sold him for two dollars as a squirrel. I did not learn who enjoyed the delicate morsel."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Constant Subscriber.—A full description of electricity applied by Faradisation is contained in Dr. Althaus' "Treatise on Medical Electricity," published by Trübner and Co., Paternoster-row.

We have been requested by Dr. Crisp to publish the following correspondence:—

"*To the President and General Council of Medical Education, etc.*

"Gentlemen,—I have forwarded to each of you a pamphlet respecting the Carmichael and Harley prizes, believing, as I have stated in my printed letter, that one of your functions is to regulate matters connected with education and the progress of Medical science. The particulars relating to these prizes are fully given in the pamphlet. In the one instance three gentlemen (one of them a colleague) awarded a prize to Dr. Harley, who had not complied with *any* of the injunctions required by the Council of the College of Surgeons; and in the other, the Council of the Dublin College of Surgeons deputed three of their members to decide a matter that Mr. Carmichael directed by his will should be left to the decision of *all* the councillors The Council of this College, moreover, advertised that prizes of £200 and £100 would be given to the best and second best essays on Medical Reform (*without reservation*), as directed by Mr. Carmichael, and although there were several candidates, the award of the prizes was illegally withheld. I shall take the liberty hereafter of placing before you other matters relating to corporate illegalities, which I believe specially come within your province. In the mean time I respectfully beg of you to investigate the grievance of which I complain, trusting that you will believe that my motive in making this appeal is neither a vindictive nor a pecuniary one? "I am, Gentlemen, your obedient servant,

"Edwards Crisp."

"June 15.

"Sir,—I beg to inform you that your memorial, and the pamphlet which accompanied it, have been submitted to the General Council during their recent Session, but the Council find themselves obliged to pass the following resolution:—'That the Council is of opinion that the memorial presented by Dr. Edwards Crisp respecting the Carmichael prizes is not within the powers of the Council as limited by the Medical Acts, and the Council therefore decline to enter upon its consideration.'

"I am, Sir, your obedient servant,

"Dr. Crisp. "Francis Hawkins, Registrar."

Errata.—P. 130, *for* "Goliah" *read* "Goliath." P. 132, in Mr. R. M. A. Hunter's letter on Indian Sanitary Reform, *for* "disadvantages of the town barracks of Bombay" *read* "advantages of the town barracks of Bombay;" *for* "Prof. of Medical Science" *read* "formerly of Moffat."

The Report in the British Medical Journal of the Case of Prolonged and Profound Sleep.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—My attention has been drawn to certain remarks in your paper of last Saturday, in which you state that the case of profound and prolonged sleep, reported by me in the *British Medical Journal*, is clearly the same case that had been previously described in the *Medical Times and Gazette* by Dr. Cousins, and add that "it is unusual for one Practitioner to give a replica of a case which has been described by another."

My report was founded upon notes I have made of the case since my first attendance in 1860, and was forwarded to the *British Medical Journal* (in April) before I saw the case reported in your columns.

Dr. Cousins, I find upon inquiry, has never seen my patient, and I am at the present time the recognised Medical attendant.

Witham, August 4. I am, &c. W. G. Gimson.

The Indian Sanitary Commission.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I take the opportunity of sending you the foundation for my belief that the Commissioners' estimates, for a time of peace at all events, is one-third too high. Mine are from personal as well as derived experience.

Abstract showing the Ratio of Deaths per 1000 *of Strength from the several classes of Diseases at the under-mentioned Stations in the Madras Command for a period of Years to* 1840 *or* 1844. *Aggregate strength during the period,* 71,419.

	Secunderabad, Ag.. 10,234.	Bellary,(a) 10,232.	Fort George, 10,423.	Cannanore, 10,322.	Moulmein, 11,435.	Trichinopoly, 11,038.	Bungalore, 9,305.	Whole Command. 76,419.
Remitting fevers..	11·8	8·4	3·6	4·	7·2	4·4	1·8	4·8
Abscess of the liver	9·4(b)	6·5	4·8	5·(c)	3·4	4·3	3·	4·7
Dysenteries	36·3(b)	8·3	14·7	20·6	16 9	13·	8·9	13·1
Cholera	1·5	17·8	10·6	1·2	1·8	7·3	4·3	6·9
All other diseases(d)	12·4	9·7	11·2	10·1	8·4	7·7	7·6	9·8
Total	71 4	51·2	44·9	41·	37·7	36·7	25·6	39·3

When the ratio by fever is high, so is that by dysentery and hepatic abscess. Bellary here exceptional.

These are in times of peace, in war times the mortality may be doubled.

N.B.—Abscess of the liver frequent with malarious dysentery, scarcely with colitis.

I am, &c.

Dollar, near Stirling, August 1. R. M. A. Hunter.

The New Regulations for the Degree in Surgery of the University of London.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Will you allow me to protest against the recent alterations respecting the Surgery at the ensuing M.B. by that restless body, the Senate of the University of London.

1. Because only three months' notice is given, and the Senate issued its regulations on January 1, 1863, defining precisely the examination and the honours for this year, and from which I contend it has no right to depart.

2. Because the style, the scholarship (£100 total), the two gold medals, and the Honours in Surgery, are the legitimate prizes of those who are at present preparing for the examination in November, according to their issued regulations, and who attain then the requisite standard.

3. Because the taking of them away at this short notice, and placing them in a new form under a new examination in March next will subject me and several others—(*a*), to a further fee of £5, which is unjust; (*b*), to the extra expense of at least a twelve days' extra residence in London for the new examination, if we wish for Surgical honours, and also that of a *locum tenens* for Professional duties, and which I estimate in my case a £10 note will not cover; (*c*), to the task of keeping up one's practice and one's reading for five more months, and which is no slight burden; (*d*), to the competition of M.B.'s who have passed their second M.B. in honours years ago, and who have no right whatever to contend again for style, scholarship, and gold medals when they have already once done so in this particular subject.

4. Because the change detracts materially from the present high character of the M.B. degree, and because very few, except pure Surgeons, care about the M.S. degree, which gives no title like that of "Doctor."

Two years back, Sir, the Senate acted with similar, but even worse, injustice to those preparing for its First M.B., and adding then, instead of subtracting, five or six subjects at a few months' notice, they dashed for ever to the ground the hopes of many students by plucking them in a most merciless manner at their preliminary scientific examination.

Trusting you will do me the favour of inserting this in your next impression, I am, &c.

August 4. A First M.B.

Aneurism by Anastomosis of the Scalp Removed by Excision.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Doubtless you may consider the brief details of the following case worth publishing, though giving them as I do from memory (having lost or mislaid the notes I took at the time), I trust your readers will not be harsh in their criticisms:—

A native of Rungpore, in Bengal, came to my Dispensary with aneurism, by anastomosis of the scalp, situated and extending over the vertex, and presenting much the appearance of the figure in Ferguson's "Surgery," p. 162. He was very anxious that something should be done to cure him, and he did not care what. I found the veins of large size, soft, and compressible, and pulsation not to be controlled wholly by pressure, though this might be partially done with the points of the fingers. As the tumour, if I may so call it, was pretty well circumscribed, and ligatures or pressure seemed to me less suitable than excision, I determined to cut out the mass. The man was not put under the influence of chloroform, but simply laid on a table, with the vertex of his head raised; and I made a circular incision round the aneurism, not careful to include all the diseased tissue, dissecting the scalp off as speedily as possible. There was a good amount of hæmorrhage and faintness coming on; with one or two ligatures, torsion, etc., bleeding ceased, recurring but slightly, and then restrained by application of tr. ferri. muriat., when the man came round. He remained in the Dispensary about a month. The wound had nearly healed by granulation, and pulsation had ceased, and the man, expressing himself cured, and grateful for the same, left the Hospital. I have not seen him, or even heard of him, since, nor do I know any further result of the case; but I think that the progress towards cure, made before the case was lost sight of, fully justifies similar treatment in future, especially when such a severe operation as ligature of the carotid is generally proposed.

I regret the case is not more complete, but in Bengal the difficulty of ascertaining the permanent results of operations is extreme.

I am, &c.

Geo. H. Poole,

Dated in England, August 4. Assistant-Surgeon H.M.I S., on leave.

Hospital Pharmacy.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have more than once read the letter of J. W. M. in your Number for the 25th of July, in reply to mine on Hospital Pharmacy in the 11th, and find it less intelligible on every successive re-perusal. There is one observation, however, which I understand, and which requires remark. J. W. M. seems to take it for granted that those who insist upon the importance of what may be called physiological remedies in certain cases, and in these certain cases have less faith in the resources of pharmacy, belong to the *laisser faire* school of medicine. As this opinion is rather generally held, it deserves examination. A man who tries as far as possible to do without drugs is said to belong to the *laisser faire* school. He trusts to Nature, and lets things take their course; he does nothing.

Now, there are two ways of doing nothing. You may literally fold your arms and watch a man die; or you may do a great deal, but nothing being done to the purpose, you may be doing nothing. The great purpose of all our doings is to restore to health. Everything which favours this event is something really done. Everything done, no matter how elaborately, which does not further this purpose, is nothing, or worse than nothing. Careless indifference, and mischievous interference, are, in a scientific point of view, both the same thing. To give a drug is not necessarily to do something. To withhold a drug is not necessarily to do nothing. If I give a hungry man food, am I doing nothing? If I give him quinine, am I doing something? A thing is then only done when it is done appropriately, and all inappropriate activity, being barren of result, is but fussy imbecility. To order medicine is said to be synonymous with doing, and not to order it is to put yourself in the *laisser faire* school! But we contend that true active treatment consists in appropriate treatment. He only does something who does what the nature of the case requires. You must not only knock, but you must knock the nail on the head. You may fire, but you make no score unless you hit the target.

Some cases are most actively treated by drugs; some by physiological remedies, and many by a combination of both, in which cases it is sometimes difficult to mete out the share of merit to the two classes of remedies. In a case of scabies I trust to sulphur; in ague to quinine; in pain to opium. If I order a case of scabies to the sea-side for "fresh air and change of scene," and withhold the sulphur, I am manifestly doing nothing to the purpose. Or, if I order cleanliness and good diet in such a case, and also use the sulphur ointment, and attribute the rapid cure to the diet and washing, I am clearly wrong. I am elevating an adjuvant into the efficient cause. On the other hand, if I treat a case of general debility depending upon want of appropriate food, pure air, and over work, without prescribing suitable food, purer air, and rest, I am committing the very same mistake, I am adopting the same inert treatment as if I were to order mutton chops and porter for scabies. I am withholding the specific remedy required by the nature of the case; and how many pharmaceutical mixtures soever I may send, am treating it according to the principles "of the *laisser faire* system of medication." And, moreover, if I treat a case, say of chorea, depending mainly upon imperfect nutritive supply, with Hospital food and Hospital arsenic, and attribute the cure mainly to the arsenic, am I not elevating an adjuvant into the primary cause of improvement? And although bad logic may not always be combined with bad practice, yet it always has its influence. If the arsenic cured, why not in the next case trust to arsenic alone?

(a) Bellary during this period, from position of barracks, in respect to native town, etc., was very subject to outbreaks of cholera.

(b) Malarious.

(c) Cannanore,—this high ratio was caused by the first quarters of 1837; the same, from some unknown cause, created very unusual mortality. At the same time, in Calabar, Bombay, Belgaund, and other stations.

(d) "All other diseases," to wit, consumption, 2·5 to 3; apoplexy, sunstrokes, etc., 3; heart diseases and aneurisms, 2 to 3; total, 7 to 8. Others scarcely, as a whole, appreciable.

True activity in treatment consists in its appropriateness. A thing rightly done is something; a thing wrongly done is nothing. To do nothing is the most active treatment when the most urgent want of the case is that nothing should be done. To do, implies not merely stir and bustle, bottles and labels, queer ℞'s and dog-Latin, but brains and thought. He who sends a diuretic mixture to a patient suffering from retention of urine, even if it be directed to be taken every half hour, is doing nothing to the purpose. He who tries first one aperient and then another in a case of strangulated hernia, is really a most inactive Practitioner. The catheter and the taxis are the appropriate remedies. And he who trusts to drugs when he ought to trust to physiological remedies is just as inactive as the man who in hernia trusts to aperients, and in retention of urine trusts to diuretics.

Some men seem to think that if we order suitable diet, rest, exercise, fresh air, and other analogous physiological remedies, we are doing nothing, because these remedies are suggested by Nature without our art. This is altogether an error. It is the error which our opponents accuse us of committing. It is trusting too much to Nature. Nature, when labouring under diseased conditions, cannot treat itself. It requires the aid of science. It is not safe always to trust to the instincts of Nature Nature when thrown upon untried conditions often utters an unintelligible moan, which science must translate into an articulate language. Nature wants something, but knows not what. The scientific exposition of this want is as much within the province of our art as is the art of pharmacy. It requires as much experience and observation and knowledge of the history of disease to prescribe natural as artificial remedies

In a word, he who does the right thing does something. He who does the wrong thing does nothing. He who places his chief reliance on the adjuvant is likely to neglect the more active agents. Active treatment consists essentially in the appropriateness of the remedy prescribed. Every case should be hit; and to hit the mark requires in each case a deliberate aim, a distinct effort of mind. And he most deserves the title of the *laisser faire* who treats his cases without special thought, and disguises his inefficiency by always "sending something."

I am, &c.

July 30. **Pro re Nata.**

The Oxford and Cambridge Mission to Central Africa.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—As you have more than once alluded in the *Medical Times* to the African Mission, you may like to see the enclosed abstract of a letter from my brother, who is now the only priest left; it seems to show their wretched state. I am, &c. **W. Proctor.**

York, July 31.

The rev. gentleman, who dates his letter February 10, 1863, says:—"The last piece of intelligence in my previous letter was the departure of Waller to buy provisions for us from the Portuguese on the Zambesi, on our finding it impossible to procure any more from the natives in our neighbourhood, who were already beginning to fall short of food. After his departure we had the greatest difficulty in providing a little for our boys, and if we had not ourselves had some oatmeal and flour in our stores, I scarcely know what we should have done. The children had to live for two days on an alligator which Scudamore shot, and a few wild pigeons which we killed for them was often all that they had in the day, although there were twenty of them. We were compelled to pay our men cloth for their work, but this was of no use, and they took to plundering the poor natives of their small stores. This, of course, we could never allow, and we were just on the point of dismissing them when the canoes arrived with Waller on Nov. 5, and we were enabled to supply our people with food. After this we got on pretty well for a few weeks, when the sad effects of the famine, caused at first by an unusual drought, and aggravated by the wars of the Achawa on the hills, and the depredations of the Makololo in the valley, began to be more sadly manifest. The crops had been dried up by the drought of the earlier months of the year, with the exception of those of maize, which were planted along the river side in the moist places. These, however, were being seized upon by the Makololo, and the poor wretches were reduced to eating the coarse fruits and roots which they were able to find in the bush. These, too, failing, they began to die, or to leave the country for parts nearer the Portuguese. We spared what we could to relieve the most distressing cases around; the sights which I witnessed of half-dead listless skeletons lying in the sun before their huts, and naked children, with glaring eyes and protruding bones, wandering about like ghosts, I hope never to behold again. A trip I took about 25 miles down the Shire, in the hope of being able to buy some seed from the natives, who we fancied might have been more fortunate than those nearer us, only tended to show more completely the wretched state of the whole country. Not a grain of any kind was to be got, and everywhere the people complained of hunger. I returned on December 8, and found, from the extra drain on our stores, that we should require a supply. I accordingly set off down the river to Viannas to purchase some food. I reached my destination on December 16, and heard that Dr. Livingstone was coming up the river in the *Pioneer* the following day. This event took place. The doctor told me there were plenty of stores for us at Quillemana, which he had helped to land in H.M.S. *Rapid* in November. I at once thought of going down there to bring them up, but was assured by the doctor that they would be sure to arrive at Vianna shortly. From a conversation with Dr. Livingstone, I am afraid all hopes of the Zambesi river being navigable into the interior are dissipated. The doctor shortly afterwards left us, and I remained waiting for the stores. I regret I have now to mention a circumstance which has cast an additional gloom over our spirits and our future—I mean the death of Mr. Scudamore, which took place on January 1. His departure is indeed a blow, and leaves me the solitary priest of the mission, the survivor of a bishop and two priests, who have all died within a year. Sad, indeed, has been the past of this undertaking, and already along the banks and in the country of the Zambesi and the Shire lie the remains of five Europeans, who have perished in the work of which Dr. Livingstone has been the leader and originator; while in his service the navy has lost several good hands at the bar of the Konjone. I had always doubts that we should not be able to gain a footing among the people of this country, but I fear more now on account of the difficulties of the country itself, and the effect which our accumulated sorrows and misfortunes will have on our friends at home, whose interest in the mission must begin to flag when they hear of our repeated reverses, and who will surely feel very unwilling to risk more lives in an undertaking the ultimate success of which is still so doubtful. As for myself, I am quite willing to remain and run every risk, and endure all trials that may yet be laid on us, if I could be hopeful that the mission will succeed at last; but there seems to us out here so many things against it, that lingering out here employed principally in procuring or thinking about food seems almost a waste of time."

The reverend gentleman then discusses at length the probabilities of the mission being continued. From the accompanying postscript it will be seen, however, that affairs had arrived at a crisis in consequence of the scarcity of animal food. The postscript is dated February 27. Mr. Proctor having alluded to the departure of Mr. Rowley, one of the mission, to Tette for food (the expected supplies not having arrived), says,—"This is our last resource; animal food is failing us, and even before Rowley can return we shall be reduced to simply vegetable diet. Of course therefore much depends upon this difficult and trying journey to Tette, which will occupy at least a month. If food can be had, all will be well; but, if not, our case is desperate, and but one resource will be left for us. I have accordingly written thus to Mr. Woodcock, our hon. secretary:—'Under the circumstances—[our condition and prospects are fully detailed in the letter]—I feel it my duty to state that, if animal food cannot be insured, and if help in men and some additional provisions do not arrive from home, we shall be compelled to quit our present abode for the sea coast, whence we shall try to make our way to either Johanna, Natal, or the Cape; and, not to leave any indefiniteness in this sad statement, I will add that, if we receive no addition to our numbers, or see no better hopes for the future before June 15 next, we shall then proceed to make our way down the river in the best way we can.' Grievous as this resolve is, I fear we cannot do otherwise. The whole country is in a state of utter ruin and destitution, and the drought still continues. Our Surgeon, Mr. Dickinson, assures us that we have only this alternative unless we choose to stay and die for want of proper sustenance."

COMMUNICATIONS have been received from—

J. Hogg, Esq.; J. Chatto, Esq.; Pro re Nata; Dr. W. Proctor; Linnington Ash, Esq.; R. M. A. Hunter, Esq; Mr. Callender; Dr. Beale; Dr. J. C. Thorowgood; Royal College of Surgeons; A Constant Subscriber; Mr. Goodiff; T. Stone, Esq.; W. G. Gimson, Esq.; G. H. Poole, Esq.; Dr. E. Crisp; Dr. H. Marshall; Dr. J. Ogle; Dr. Leared; J. H. James, Esq.; Mr. Thomas Stevenson; Mr. W. Dunnett Spanton; Royal Medical and Chirurgical Society; Mr. Julius St. T. Clarke; Dr. E. Heginbothom.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 1, 1863.

BIRTHS.

Births of Boys, 1007; Girls, 934; Total, 1941.
Average of 10 corresponding weeks, 1853-62, 1645·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	803	711	1514
Average of the ten years 1853-62	589·7	578·0	1167·7
Average corrected to increased population ..	..	..	1284
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	6	4	18	1	3	6	42
North ..	618,210	17	5	22	5	4	11	40
Central ..	378,058	9	2	15	4	5	5	28
East	571,158	4	3	36	2	7	16	48
South ..	773,175	7	9	31	4	11	15	43
Total.. ..	2,803,989	43	23	122	16	30	53	201

APPOINTMENTS FOR THE WEEK.

August 8. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

10. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

11. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

12. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

13. *Thursday.*

Operations at St. George's, 1 p.m; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

14. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

LECTURES
ON
ECZEMA,
(INCLUDING ITS IMPETIGINOUS, LICHENOUS, AND PRURIGINOUS VARIETIES,)

DELIVERED AT THE
Dispensary for Skin Diseases, Glasgow.

By T. McCALL ANDERSON, M.D., F.F.P.S.
Physician to the Dispensary for Skin Diseases; Physician to the Deaf and Dumb Institution, etc., Glasgow.

LECTURE VI. (a)

(Continued from page 138.)

Eczema often attacks *the hands* (eczema manuum) and *the feet* (eczema pedum), and is often limited to one or other of these parts. Sometimes one hand or foot is attacked, oftener both, but it is rare for both hands and feet to be implicated together, the other parts of the body being spared. The hands suffer alone much oftener than the feet, being exposed to the air, and to the action of local irritants. Hence cooks, bakers, grocers, bricklayers, smiths, etc. are very subject to the disease, their hands being exposed to great heat, or to the irritation of sugar, lime, particles of heated iron, etc.

Owing to the number of the joints, and the constant movement of the parts, fissures form with exceeding frequency in eczema of the hands and feet, but especially in the case of the former. Indeed, it is on the palms of the hands that you see the most typical cases of the fissured variety of eczema (see description of eczema rimosum, Lecture II.).

The hands and feet are often affected with eczema occurring in small, scattered, circumscribed patches, which are frequently very obstinate.

When the vesicular form of eczema attacks the soles or palms, but especially the former, the vesicles remain long intact, owing to the thickness of the cuticle, and the serum, unable to escape externally, burrows beneath the skin. Many vesicles thus run together, and bullæ, often of large size, are occasionally formed. The eruption may then be mistaken for *pemphigus*, but, in the former, we are guided by the history of the formation of the bullæ by the confluence of vesicles, by the small number of the bullæ (usually only one or two), by their occurring only where the cuticle is thick and resisting, and by the detection of vesicles around the edges of the bullæ, and of a fully developed eczematous eruption in the neighbourhood.

To avoid falling into the error of mistaking eczema for *scabies*, you must bear in mind what I have already told you under the general diagnosis of eczema; but I may call to your recollection two very important points of diagnosis, namely, that in scabies you should be able to detect the furrows of the itch insect at least, and should inquire if there is any sign of the eruption being contagious, scabies being very contagious, eczema not at all.

Syphilitic eruptions on the palms of the hands and soles of the feet may be mistaken for eczema. I have already pointed out most of the symptoms which distinguish a syphilitic eruption from a non-syphilitic eczema, but, in addition, I may remind you that a syphilitic eruption on the palm usually commences as a small spot near its centre, which gradually extends circumferentially and heals in the centre so as to form at last a circle of eruption enclosing healthy skin. The eruption has besides a coppery tint, is scaly, but neither moist nor itching, and it is removable by mercury and iodine alone. You must know, however, that this is often the only sign of syphilis which the patient exhibits at the time he is under observation.

The only remark which it is necessary to make with regard to treatment is, that the patient should be confined to bed during the cure, if possible, when the eruption is on the feet; but if this cannot be effected, a bandage should be constantly and equably applied. As to the hands, padded splints may be fixed on the flexor surfaces of the hands and wrists, so as to keep the joints at rest, and facilitate the healing of the fissures. When bullæ form, they should be left intact unless the pain and tension are great, when the serum may be allowed to escape by means of a small puncture.

In *eczema of the legs* (eczema crurale) we must bear in mind the predisposing causes; the distance of these parts from the centre of the circulation; their usually dependent position, and the frequent occurrence of varicose veins, particularly in persons advanced in years. We must also recollect that the eruption is a frequent accompaniment of that thickening of the tissues and swelling of the leg which goes by the name of elephantiasis arabum.

All these circumstances, by retarding the current of the circulation and keeping up congestion, account for the fact that eczema is very apt to assume its most aggravated forms on the leg, and that ulcers, often of great size, so usually complicate the affection (eczematous ulcers, as they are called). These sores may exhibit any form of ulceration from the inflamed to the indolent, and must be treated according to their appearance upon general principles.

In the treatment of eczema of the legs, it is of the first importance to confine the patient to bed, or to the sofa when it can be managed; otherwise you will meet with many cases which resist all the other recognised means of cure. A case of this kind occurs to me now in which everything failed till I prevailed upon the patient to remain in bed for a week, in addition to the treatment previously followed out, at the end of which time the disease, which had resisted treatment for many weeks, had completely disappeared.

The use of a bandage is always to be recommended, and, while it is indispensable if the patient is going about, it is also serviceable by giving support and relief from uneasiness when he is confined to bed. It should be firmly and equably applied, and taken off several times daily and readjusted, as it is apt to become loose, and consequently ineffective. The bandage may be of linen, and applied dry, or it may be dipped in a solution of dextrine in boiling water, according to Devergie's recommendation, so that when it dries it forms a hard case for the leg. The firm application of straps of adhesive plaster, about an inch wide, and long enough to go once and a-half round the limb in the form of a scultetus, is often useful, especially if indolent ulcers are superadded. You will often find it necessary before applying the plaster or the dextrine bandage to cover the eruption with a thin rag smeared with cold cream or fresh butter, as they are apt to irritate it. Sometimes a flannel bandage may be used with advantage, either dry or wrung out of cold water, or steeped in one of the solutions (such as the "tinctura saponis viridis cum pice") which you are applying to the eczematous surface. The local applications used in eczema of the legs do not differ from those employed in the treatment of other parts, with this exception, that you may oftener have recourse to leeches, and with temporary benefit, than when the eruption is situated elsewhere, owing to the great tendency to congestion of these parts.

Eczema of the genital organs (eczema genitalium) occurs both in females and males. In the *female* the eruption may be limited to the labiæ, or extend upwards to the mons veneris, downwards and backwards to the perineum and anus, and laterally to the angles formed by the junction of the labiæ with the thighs. The vagina may likewise be implicated, in which case its walls are infiltrated, reddened, and exuding; but it is not the seat of any itching, except at the orifice of the canal. The labiæ and clitoris are often enormously distended, and the itching so harassing as sometimes to induce irritability of the bladder and to lead to improper habits. At times the exudation from the eruption is great, at others the parts are dry and scaly. The local causes specially operating in the production of this variety of eczema are irritating discharges from the genital organs, the habitual warmth and moisture of the parts, and the friction of opposed surfaces. Pregnancy, also, and tumours of the uterus and neighbouring viscera act as predisposing causes, by pressing on the large vessels and causing congestion and a varicose condition of the veins of the genital organs.

In the *male* the eruption attacks the scrotum or penis alone, or involves also the neighbouring parts, as in the female, or invades the greater portion of the cutaneous envelope. The scrotum and penis are often enormously distended, producing a sort of elephantiasis of the parts, which is apt to mislead one as to the nature of the case. The skin is often quite tense, red, perfectly smooth and shining, and the exudation profuse, dropping continually from the most dependent part of the scrotum or soaking the dressings. The itching is usually excessive, and may lead to masturbation and irritable bladder.

(a) These Lectures have been carefully revised, and many alterations and additions made.

In the more chronic variety, the formation of scales often takes the place of the serous exudation, and, as pointed out by Hebra, the scrotum being thrown into folds, the eruption is often limited to the prominences of the folds, the intervals between each fold being free from disease, as may be detected by putting the skin upon the stretch. I have read, though I forget where, of cases of eczema of the genital organs being produced or kept up by stricture of the urethra, the cure of the eruption coinciding with the removal of the stricture.

Eczema is often limited to the anus (eczema ani), though it frequently extends to the neighbouring parts. As before mentioned, it sometimes occurs in connexion with eczema of the lips (see eczema labiorum, Lecture V.). The occurrence of the eruption is favoured by constipation of the bowels, or other gastro-intestinal derangement, by hepatic disturbance, tumours in the abdomen, or anything which prevents the free return of blood from the rectum. It frequently coincides with a varicose condition of the veins of the rectum, and with hæmorrhoidal tumours, hence the name eczema hæmorrhoidale.

Sometimes the morbid condition of the anus is arrested in the first stage, and does not amount to an eczema, itching being almost the only symptom (pruritus ani), which is often very distressing. But, in persons predisposed to eczema, the scratching calls forth an eczematous eruption, which is too frequently complicated by the formation of fissures, and these are exceedingly painful, especially at stool.

The treatment of eczema of the genital organs and anus does not differ from that of eczema in general, except in so far as we must bear in mind the predisposing causes, and endeavour to remove them if possible. I must refer you therefore to the treatment of eczema in general, and to the remarks which I am about to make with regard to the treatment of eczema intertrigo.

Eczema not unusually attacks *the nipples* and neighbouring portions of the breasts (eczema mammæ), the nipples being usually situated in the centres of the patches. The eruption occurs oftenest in the female in connexion with lactation, and chapped nipples constitute, in reality, the commencement of the fissured variety of eczema (eczema rimosum). In males, or in females who are not nursing, the detection of an eczematous eruption upon the nipples should lead us to suspect that it is brought out by the scratching induced by an attack of scabies, and the acarus and its accompanying symptoms should be sought for. Eczema of the mamma is apt, by extension of the inflammation to the deeper-seated parts, to give rise to abscess of the breast.

Sometimes an eczema is developed around the *umbilicus* (eczema umbilici), especially in the case of those who are affected with scabies, but the eruption here exhibits no peculiarities.

The eruption is exceedingly prone to invade those portions of skin *which are in contact with one another* (eczema intertrigo), owing to their moisture, and the friction to which they are exposed. We accordingly find it very frequently in the axillæ, between the hips, at the angle where the thigh meets the perineum, and behind the ears. For similar reasons we find it often in the flexor surfaces of the joints, these parts being in contact with one another in certain positions of the limbs.

In such cases we must wash the parts frequently, but dry them thoroughly after each ablution. The opposed surfaces of skin must be kept separate also, so as to prevent friction, and the accumulation of the exudation, for which purpose a piece of dry lint may be inserted between them, care being taken that it is smoothly applied, and frequently changed, else it becomes soaked in the discharge, acts as an irritant, and does harm instead of good. It is very useful, also, before applying the lint to sprinkle a little powdered starch or oxide of zinc over the eruption. The powder absorbs the excessive moisture, which, along with the friction of the opposed surfaces, is the exciting cause of the disease. The drying up of the moisture and the prevention of friction are often of themselves sufficient to effect a cure, especially if the attack is not a severe one, but, if these means fail, the treatment recommended for eczema generally must be superadded.

BLUE FOR EVER!—It is said that the prize winners in all the recent rifle contests at Wimbledon have had blue eyes.

ORIGINAL COMMUNICATIONS.

CLINICAL MIDWIFERY.

By FRANCIS H. RAMSBOTHAM, M.D.

Physician-Accoucheur to the London Hospital, etc.

(Continued from page 90.)

Secondary Fœtus.

Case 214.—Mrs. B., Stockwell, a lady whom I had attended with two or three children, being about three and a-half months advanced in pregnancy, was caught in a sharp shower while out walking in March, 1840. She ran rapidly home, and on the same night was seized with a sanguineous discharge from the uterus, to a considerable extent, which was followed by well-marked uterine contractions, and some limpid fluid. When I saw her early the next morning she still had periodical pains, and there was a slight draining of blood also going on. I had very little hope of preventing miscarriage, but under the ordinary treatment of rest, small doses of opium, etc., the symptoms gradually subsided, and rather to my surprise she went on in pregnancy. I was summoned to her in labour on July 19, at 1·30 a.m., when she had just completed eight months; and the child, a fine boy for the time, was born in an hour. The placenta passed soon, and with it there was expelled a dead and somewhat flattened fœtus of about four months' age, attached by the funis to an after-birth of appropriate size. There is no doubt that the exertion she made caused a partial separation of one of the placentæ, that the membranes of the same ovum were ruptured by the contractions that took place, and that the liquor amnii escaped. The death of that embryon necessarily occurred; but the principle of vitality was so strong within the uterus, that gestation was continued for the sake of the living fœtus which it contained, and the living child and dead embryon were expelled nearly together. The pressure they must be subjected to between the growing ovum and the walls of the uterus will account for the flattened state in which these secondary fœtuses are generally seen.

N.B.—Such an occurrence as I have detailed has been cited as a proof of superfœtation in the human subject; but all such cases are merely twin conceptions where one ovum dies but is retained *in utero* till the expulsion of its brother at or about the normal period. Unless where there exists a double uterus, or an uterus with a double chamber, superfœtation at such a distance of time as here related cannot happen. These secondary fœtuses are always born dead, and the only difficulty that could arise in the explanation of the case is that they are almost always, if not indeed universally, quite fresh, with no signs of putridity about them. But this may be accounted for by the powerful vital principle which is resident in the gravid uterus, and which is in fervid operation for the purpose of bringing to perfection the living being it contains. It thus protects the dead mass from the ordinary changes of decay, and acts as an antiseptic preserver. In some of the cases before detailed, as will be seen, I was obliged to remove the placenta from the uterus; and besides these, either in consultation or in cases of my own private practice, during the five years between the first of January, 1840, and the last day of December, 1844, I have been called upon to take away that mass by the hand twenty-four times. This operation was necessary, in consequence either of flooding following the birth of the child, or of the time (one hour and a-half) having expired which I think it safe and proper to wait. In by far the greater number of these cases the placenta was adherent, and the general features pertaining to them all are so much alike, that it would be tedious in the extreme were they to be detailed at length, but there are some of an unusual, and others of an interesting character, which it is worth while to notice. Thus, in one of my private patients who had borne seven children, this was the fifth time I had been compelled to remove the placenta from the uterus in consequence of adhesion; she always complained of a dull, heavy, fixed pain in the left side low down, soon after quickening, which continued through the remainder of pregnancy; and this was attended by a little febrile excitement, especially at first. Looking upon it as indicative of low inflammation, which terminated in the effusion of a thin layer of lymph, that glued the two surfaces together, in her next pregnancy, as soon as it appeared, I had her bled to about six ounces, repeating the same operation twice again at the end of a month's time. That labour passed without the same dangerous occurrence happening, and this encouraged me to repeat the practice in all her subsequent pregnancies, with such good effect, that she never had an adherent placenta since.

Removal of a Portion of the Placentæ of Premature Twins, Retained a Week.

Case 215.—On March 20, 1840, at 1 p.m., a Medical friend requested me to see Mrs. G., Bishopsgate-street, who had been delivered of twins at six months that day week at 11 p.m. The placentæ did not descend, and hæmorrhage coming on, my friend introduced his hand into the uterus and believed he had got away the whole of both. The bleeding, however, continued, though not nearly so copiously, and the woman for many hours suffered severely from after-pains. In three days the discharge assumed a putrescent odour, and just before I saw her she had experienced a violent rigor. I found the pulse 130, and the bladder greatly distended, not so much from inability to pass urine, as from disinclination on her part to make the attempt, owing to the pain its passage gave her; I therefore at once introduced the catheter, in doing which I was sensible of great heat in the vagina, and I felt also some parts of the membranes protruding through the os uteri; as at that distance of time from labour (seven days) it would have been impossible to introduce the hand into the uterus, and as from its enlarged tender condition, as well as from the other symptoms, I was satisfied some part of the placentæ was still within the cavity, I used careful traction by the two first fingers of the left hand at the protruding membranes, and thus removed gradually a piece of placenta almost as large as a woman's hand. The pulse soon fell to its normal standard, all the bad symptoms subsided one after the other, and she recovered without any other cause for anxiety showing itself.

Placenta at Four and a-half Months Retained Five Days.

Case 216.—On September 17, 1840, I was sent for by a Professional friend to Mrs. B., Tenter-ground, Goodman's-fields. She had aborted of an embryon at four and a-half months on the 12th, and had flooded a good deal after, the placenta being still retained. She was faint and pale; I found the placenta partly protruding through the os uteri, and by some management I worked it out by my fingers. The flooding ceased immediately, and she did well. The placenta was not in the least putrid.

N.B.—I have before remarked that oftentimes the placentæ of immature children, when retained, do not show any sign of putrefaction, and this case bears out that observation; but if a portion of, or a whole, placenta at full time, or nearly so, remain within the uterus after labour, it invariably begins to putrefy in thirty-six or forty-eight hours—perhaps less.

Disrupted Placenta.

Case 217.—On September 30, 1840, at 11 a.m., a Medical friend called me to Mrs. H., Minories, the mother of a large family, who had been delivered two hours. The placenta was firmly adherent, and he introduced his hand with the purpose of removing it, in doing which it was much broken. The woman continued to flood, and suffered some violent after-pains. Being sure that there was either a piece of the placenta left behind *in utero*, or a firm coagulum there, I introduced my hand and removed a piece of placenta as large as a walnut in its outer shell. The hæmorrhage ceased immediately, and she gradually recovered.

Retained Placentæ of Twins.

Case 218.—On November 29, 1840, at 1·30 p.m., I was requested by a midwife to the Royal Maternity Charity to see Mrs. C., one of the patients. She had been delivered of one child at 5 a.m., and of a second at 11·30 a.m. I found the placentæ were both entirely *in utero*, retained by an irregular contraction at the fundus. This part of the uterus was strongly contracted round them, so much so that I had very great difficulty indeed in carrying my hand up to where they lay. There was very little hæmorrhage, but much after-pain. I was at least fifteen minutes before I could overcome the contraction so as to command the whole of the mass. No part of either was adherent, only retained by this irregular action. She did well.

Profuse Hæmorrhage from Retained Placentæ of Twins at Three Months, Six Weeks after the Miscarriage took place.

Case 219.—In the afternoon of August 20, 1842, a Professional friend requested my advice in the case of Mrs. H., Commercial-road East. She had borne seven children, and six weeks before had miscarried of twins at three months. They passed on two successive days, but the placentæ did not come away. There was not the least discharge of blood, not even a stain. She began to walk about in a week, and, thinking herself quite well, went to Gravesend. She was perfectly free from any discharge till about a month after the occurrence, when she experienced a gush of blood that lasted about two hours. It then ceased, and there was no return till the day before I saw her; she then had a slight loss, but about midday of the 20th a fearful hæmorrhage took place suddenly; my friend told me that he saw a chamber-pot quite full of blood. Before I arrived she had lost as much more almost, which I saw—at least three quarts in the whole. She was very faint and cold, the pulse was scarcely to be felt, and bleeding was still going on. I found the os uteri sufficiently open to admit the ends of two fingers, and I felt something protruding through it into the vagina; I removed it. It was a part of one of the placentæ covered with clotted blood. I still felt something more *in utero;* and with a good deal of trouble I got two fingers of the left hand well within the mouth, so as to command the cavity. I separated and removed the whole of both the placentæ, with the exception of the piece I had brought away before. They were strongly adherent, and not in the least putrid. The discharge immediately ceased entirely; next day she had rallied wonderfully, and she got well.

Disrupted Placentæ of Twins at Six and a-half Months—Hæmorrhage.

Case 220.—On April 24, 1843, at 10·30 p.m., a Medical friend called me to Mrs. D., Highbury. She was between six and seven months advanced in her ninth pregnancy; was very large, and had suffered some hæmorrhage during the day, for which she could not account. Labour pains soon came on, and she was delivered at 6·30 p.m. of two immature fœtuses. They both breathed for a few minutes. There was a large quantity of liquor amnii with each. After the birth of the second, she fainted, though the loss of blood had not been great, and the faintness continued to an alarming extent for more than three hours. She had rather recovered when I arrived, but there was bleeding still going on. My friend, in endeavouring to bring away the placentæ, had broken both the funes off close to the beds, and then he introduced his hand and removed what appeared to be the whole. The mass had been adherent; it was soft and much broken. I found the vagina filled with coagula, and the uterus so large that I was satisfied a portion was still behind. I therefore introduced my hand, and removed a piece, which was adherent, as large as a nonpareil apple. The uterus contracted well, and the hæmorrhage immediately ceased. Next morning I received a note saying she was so much better than could have been expected that the family would not trouble me to call. I heard nothing more of her.

Adherent Placentæ of Twins at Five and a-half Months.

Case 221.—On September 11, at 11 p.m., I was requested by a Professional friend to see Mrs. M., in Newgate-street. She had expelled two fœtuses of five and a-half months' age about half an hour when I arrived. There had been much hæmorrhage, and both placentæ were *in utero*, from which cavity I removed them. One was strongly adherent. There had been a very large quantity of liquor amnii with each, and she had increased very rapidly, with much pain, so as to have induced an experienced Physician to keep her three or four weeks under treatment for inflammatory ascitis. On the removal of the placentæ the hæmorrhage ceased, and she speedily got about again.

Adherent Placenta Removed Twenty and a-Half Hours after the Child's Birth.

Case 222.—On February 28, 1844, at 1 p.m., a Professional friend sought my advice in the case of Mrs. R., Fleet-street. He had delivered her by "turning" under a transverse presentation at 4·30 the day before; the membranes had then been ruptured more than twenty-four hours, but he had not removed the placenta. She had not lost much blood; had passed a good night; the pulse was quiet, and the system apparently not disturbed. I found the uterus large and hard, firmly contracted round the placenta, and the funis broken off close to its insertion. Being very anxious to bring the mass away, I made considerable effort for that purpose, but I had very great difficulty in introducing my hand; at last I managed to separate it; it was firmly adherent throughout.

On examining it after removal, I found it was much broken, and about a third was wanting. I passed my hand therefore a second time, and took away what was left with comparative ease; putrefaction had scarcely commenced. There was very little blood lost. The pressure on my hand, while *in utero*, was so great as to produce violent cramps in the muscles of my arm, so that I could not use my fingers for more than an hour. Nevertheless, she recovered perfectly well, and I attended her with three or four children after, as her previous attendant had left the neighbourhood. This lady had suffered from an adhesion of the placenta in her last labour.

N.B.—My own practice is to remove the placenta instantly, by the introduction of the hand, should dangerous hæmorrhage occur, and at the expiration of an hour or an hour and a half if there is no flooding. I never under any circumstances wait longer; and if I find the whole placenta is not taken away, should the portion wanting be as much as a quarter or a sixth part, I always introduce my hand a second time for its removal, because I am fully convinced that a woman cannot be left in a more dangerous state after delivery (unless, indeed, laceration of some internal organ has taken place), than with a part of the placenta adherent to the uterus and retained within its cavity. To say nothing of the chance of continued hæmorrhage, the portion will putrefy, the putrid fluid will in part be absorbed, and a low typhoid fever of the worst description will be set up; unless, indeed, the process of putrefying should cause its separation from the uterine walls, and thus give an opportunity for the organ to expel it.

8, Portman-square.

(To be continued.)

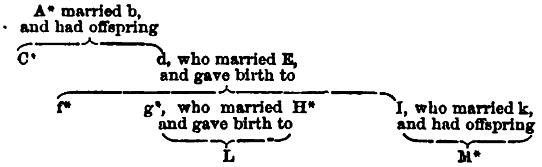
INTERESTING CASE OF HEREDITARY DEAF-MUTISM.

By ARTHUR MITCHELL, A.M., M.D.
Deputy-Commissioner in Lunacy for Scotland.

The following case of hereditary deaf-dumbness affords an interesting illustration of the indirect transmission of hereditary defects, and of the difficulties encountered when endeavouring to determine what proportion of any given defect is due to heredity.

A deaf-mute man married a hearing woman, and had two children by her—a deaf-mute son, who died childless, and a hearing daughter, who married a hearing man, and gave birth to three children—two deaf-mute daughters and a son who heard. This son married a hearing woman, and had by her a deaf-mute son. Of the daughters, one is childless, and the other married a deaf-mute, and bore a hearing son.

The following is a diagrammatic representation of this case. Capital letters represent males, and small letters females, and an asterisk attached to a letter shows that the individual was a deaf-mute:—



Now, the interesting feature of this case may be illustrated thus:—When the deaf-mute boy, M*, is asked whether he inherits his defect, he can answer that neither his parents nor his grand-parents were deaf; yet a clearer case of hereditary deaf-mutism never existed, appearing, as it does, successively in four generations. Though the defect was not actual in his parents and grand-parents, it was potential, and became actual in their offspring. His father heard, but his father's sisters were deaf-mute; his grandmother heard, but her brother did not; and his great-grandfather was himself deaf and dumb.

When the same inquiry is addressed to this boy's cousin, the reply is very different. He tells you that his father and mother were both deaf-mutes, yet he hears himself. He may, however, possess the defect potentially, and it may show itself in reproduction. We have before us in this case the evidence that the defect may even twice be transmitted potentially, and appear as actual in the third generation—thus A*, a deaf-mute, transmitted his defect potentially to d, and d potentially to I, and I actually to M*.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

◆

THE LONDON HOSPITAL.

HYDATIDS PASSED BY THE URETHRA—RECOVERY.

(Case under the care of Mr. CURLING.)

In April, 1862, J. P., aged 35, a working engineer, from Sheerness, who had generally enjoyed robust health, but was looking pallid and out of condition, consulted Mr. Curling in consequence of suffering from a dull pain in the right loin, and of the passage of some white bodies in micturition. He first noticed these bodies about a month previously. He was attacked with pain in the right loin and right testicle, which lasted for some hours. This was followed by a muddy state of the urine, and he then passed some of the white bodies, often with difficulty, as they stuck in the urethra. The attacks occurred about once a week, and about four white bodies were voided afterwards. In the intervals he was subject to a dull pain in the right loin. His health had become impaired, and he had lost appetite and flesh, and was unequal to his work. His urine was found to be turbid, slightly albuminous, and feebly acid. He brought with him some of the white bodies, which proved to be hydatid cysts. He was recommended to come into the London Hospital, and was admitted May 28. In a few days he was attacked in the usual way, and passed several hydatids. At this time his urine was alkaline. Mr. Curling ordered twenty drops of oil of turpentine with five drops of laudanum, mucilage, and cinnamon water, to be taken three times a-day. In a few days he passed several hydatids. The medicine was continued for a week, when it produced purging, and was discontinued. Twenty drops of the tinct. ferri sesquichloridi was ordered to be taken three times a day. The man soon lost all pain in the loin, and, feeling much better, left the Hospital, June 7, and returned to his work in the dockyard at Sheerness. On the 25th he wrote to me to say that his health was as good as ever it had been; that since leaving the Hospital he had not suffered any pains in the loin, and had not passed any more white bodies with his urine.

The hydatid cysts were about the size of marbles, and contained echinococci, but not abundantly.

Cases in which hydatids have escaped with the urine are of rare occurrence. A series collected with a good deal of pains was published some years ago in the *Medical Times and Gazette* (Vol. I., 1855). The writer was unable to determine the exact seat of their development, but he supported the view taken by Dr. Bright, that they are not formed in the kidney, but are developed in the areolar tissue in the vicinity of this organ, or of the ureter. In the case just related there was considerable pain in the right loin, extending down to the testicle. This symptom, together with the altered condition of the urine, which lasted until the hydatids ceased to pass, and the successful treatment with the oil of turpentine, favour the conclusion that the hydatids in this case were developed in the substance of the kidney.

MIDDLESEX HOSPITAL.

NECROSIS OF THE HARD PALATE—EXFOLIATION OF A LARGE SEQUESTRUM THROUGH THE POSTERIOR NARES.

(Cases under the care of Mr. HULKE.)

A pianoforte-maker, aged 28, of healthy appearance, was sent to the Surgical out-patients' room January 29, 1863. He said that fourteen days before he had coughed up a thin, oblong piece of bone, three-quarters of an inch wide. It had sharp edges and angles, and a groove dividing it into halves, from which flutes ran slantingly towards two sides. From this description, and a drawing he made of the bone, there could be no doubt that it was formed by the united horizontal plates of the two palate bones.

On exploring the roof of the mouth, a small aperture was detected in the median line, about a quarter of an inch in front of the attached border of the soft palate. It just admitted a small probe, which, after passing half an inch upwards, met a firm elastic, but not bony resistance. A few weeks before coughing up the piece of bone, he noticed, for a day or two, a slight purulent discharge when he blew his nose, but this ceased after the expulsion of the bone.

ALMOST COMPLETE UNION OF THE FREE BORDER OF THE VELUM PALATI MOLLIS WITH THE BACK OF THE PHARYNX.

(Under the care of Mr. HULKE.)

A maid-of-all-work, aged 22, was brought to the out-patients' room August 6, 1862, to know if her vision, which was impaired by a corneal cicatrix, could be improved. Her peculiar nasal voice drew attention to her throat. The whole free border of the velum was connected with the back of the pharynx, excepting in the situation of the uvula, which had disappeared, where there was a small hole through which a probe could be passed upwards.

Her dwarfed stature, flattened features, widely-set and peg-like teeth pointed to inherited syphilis. Her mother had had several miscarriages before giving birth to this living child. In infancy she had a sore mouth, and at four years old ulcerated sore throat.

ALMOST COMPLETE UNION OF THE VELUM PALATI MOLLIS WITH THE BACK OF THE PHARYNX—LARYNGITIS.

(Under the care of Mr. HULKE.)

A feeble, cachectic charwoman, aged 39, came to the out-patients' room February 19, 1863. Her breathing was rough, and on the least exertion hissing; the supra-clavicular fossæ were deeply tucked in during inspiration; the chest was imperfectly filled. She had a troublesome paroxysmal cough, and for some time had scarcely ventured to lie down at night for fear of suffocation. The larynx was very tender when pressed.

On looking into her throat, the fauces were seen to be much scarred. The velum was strained tightly downwards to the back of the pharynx, to which its free border was united in its whole extent, except at the right of the uvula, where there was an aperture three lines in diameter, communicating with the upper part of the pharynx.

This peculiar position of the velum, and the extreme irritability of the throat, made it difficult to obtain a good laryngoscopic view of the interior of the larynx. The laryngeal surface of the epiglottis was intensely red. The rima glottidis was very narrow, the mucous membrane covering the vocal cords being swollen and congested, and the left upper cord had a greyish-white patch covering its posterior two-thirds, whether a film of exudation or a slough was not determined.

There was a clear history of syphilis. The patient had enjoyed fair health until her marriage, after which she had a scaly eruption on the chest, caries of the nasal bones, and ulcerated throat. Her three children died in infancy.

ST. BARTHOLOMEW'S HOSPITAL.

PAIN IN THE LOWER END OF THE FEMUR RELIEVED BY OPERATION.

(Case under the care of Mr. PAGET.)

G. C., aged 32, a farm labourer, was in good health until his fifteenth year, when, after being exposed to wet weather, and after kneeling for some time on damp ground, he was suddenly laid up on account of severe pain in the right knee-joint, and lower part of the thigh. Abscesses formed slowly, and opened above the joint over each condyle of the femur: but after about four months' confinement to the house, he returned to his work.

Seven years after this several large spiculæ of bone "worked out" through the original sinuses, which had never healed, but which had not caused him much trouble, nor had obliged him to leave his work during any part of all this time. These sinuses, however, after the discharge of the dead bone, healed, and the limb became as useful as ever, and remained sound until eight months before his admission into the Hospital, when he was again laid up with pain at the original seat of the mischief. He has not been able to work since.

When he was admitted, the right leg could not be straightened, and he complained of great pain, of a dull, aching character, especially at night, about the lower end of the thigh. There was some slight effusion into the knee-joint, and the soft parts around were a little hot and tender. The lower end of the femur, too, felt as if somewhat thickened.

The limb was put up in splints, etc., so as to keep it perfectly quiet and level. Compound mercurial liniment was applied to the painful parts. But no good seemed to be derived from this plan of treatment, at least so far as the most prominent symptom, viz., the constant, fixed, dull, aching pain in the lower end of the femur was concerned. Subsequently, under the suspicion, rather strengthened by the feeling of thickening around the bone, that the pain might be due to a periosteal affection, large doses of iodide of potassium were administered, but with no benefit whatever, and the pain still remained wholly unrelieved after calomel and opium had been given until the gums were slightly affected.

Mr. Paget therefore made an incision in the outer and lower part of the thigh, through the integuments and muscles, down to the bone, and cut through the periosteum. With the exception of slight thickening and roughening from the deposit of new bone, no abnormal condition of this or any of the superficial structures was exposed by the operation. Nothing further was therefore done, and the patient was sent back to bed.

March 2.—He has had little or no pain since the operation, and, at the present time, six weeks after it, he is in good health, with the wound healing well.

July, 1863.—He left the Hospital some time ago quite well, and free from pain, of which he had had no return since the operation.

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Medical Times and Gazette.

SATURDAY, AUGUST 15.

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THE MEDICAL OFFICERS OF THE ARMY IN INDIA AND SANITARY REFORM.

In a leading article of the 30th ultimo, the *Times* passes in review those great changes and the wonderful strides of progression which have taken place in all that concerns our great Indian possessions. It contrasts the present state and future prospects of that large continent with what its condition was at the advent of its occupancy by us. In the face of the things which have been already achieved, and the still more wonderful progress which is promised in the future, the tone of the writer could scarcely fail of being eulogistic.

The achievements which have been attained and the difficulties which have been overcome are, indeed, such as could hardly have entered into the imagination of our ancestors. Of that page in our history which describes our connexion with India, Englishmen can scarcely fail to be proud. If it cannot be said to be unstained by any great crimes and shortcomings, it yet forms a wonderful and glorious epoch in our national history. In the eye of fancy or faith, says the article in question, Sir C. Wood has looked at those glorious mountain prospects opened by the railway inclines as, in the course of fifteen miles, they scale mountain passes in Central India 1860 feet high. He has also a vision of capacious, clean, airy, and convenient barracks, with every modern improvement, on healthy spots, which will not call for that heavy recruiting hitherto the saddest feature in our Indian system. He sees, also, numerous sanitaria, far above unhealthy influences, where the soldier may be revived and sent back to his post.

The commencement of these sanitary reforms and improvements indicated by the Commission in their published report, and which Sir C. Wood has promised shall be carried out, must be anxiously anticipated by every one. It will be an additional disgrace to us as a nation if we permit any unnecessary and criminal delay.

The publication of such a report as that so recently given us by the Sanitary Commission teaches the old, old lesson, that it is not until the public has become interested and importunate that the authorities will learn to accept the conclusions which the facts afforded by a century's occupation of India have been daily forcing upon us.

Statistics, however valueless they may prove in solving some questions, cannot be gainsayed as to matters of fact, such as the relative rate of mortality and the nature of the enormous amount of disease affecting our Indian troops. A mortality of upwards of 90 per 1000 among our troops there cannot fail to arrest the attention, and set us all thinking about what can be done to lessen the evils which figures like these prove to be operating with such lethal powers. Is India always to be the grave of our noblest statesmen and soldiers, and to drain us of the strongest and ablest of our fellow-countrymen at this fearful rate without our having tried everything that science and common sense would suggest? To any one at all conversant with the laws of health and the physiological modifications of body induced by climate, the wonder would rather be, perhaps, that a still more dreadful mortality had not attended our defiance of these laws.

Active disease and premature death have been such common occurrences in India that people have been led, from this very fact, to believe these to be the price which we must pay for our tenure of that country; because they were *so common*, they ceased to arrest any attention, and their causes remained unsought for, or were disbelieved by the home authorities when reported to them.

Are we to suppose that, amid the thousands of able men who have served and perished in India, there have been hitherto found none to raise a warning voice, or to indicate the origin and causes of the diseases affecting the constitution of the European? It would be the greatest injustice to think that it had been so. The question was asked the other day in the House of Commons, what were the reasons that Medical officers were precluded from sitting as Presidents of any Boards, whatever their nature. No explanation was given, but the Minister for War sought cover beneath the statement, that such was the conclusion of a commission, of which Dr. Gibson was a member, and that there was no intention of casting any stigma on Medical officers!

Now, we confess to entertaining a very firm belief that not only is there no reason against, but a great many reasons for, the qualifications of a President being particularly present in the person of a Medical man. To advise upon the site and construction of barracks and Hospitals, the healthiness or unhealthiness and the drainage of a given district, the amount, nature, and quality of food, clothing, and drinks for troops serving in India; the amount and the best times for the performance of military duties; these are matters upon which an experienced Medical officer is, or ought to be, pre-eminently fitted to direct the members of a Court or Board. The Medical officers of India are empowered to represent, as much as they like, the presence of evils which they cannot remove, but which might have been prevented had their opinions been sought, or had they been armed with any authoritative powers to enforce them. Let us glean one from the rich field of illustrations afforded by every Report extant in the Medical Department, and we leave it to our readers to say *how far it is expedient to curtail any of the powers given to Medical officers!* In Staff-Surgeon Dr. Crawford's "Sanitary Report on Secunderabad for 1860" we find:—

"The pressure of an unusual demand, the low state of the exchequer, and the necessity of finding immediate shelter for the troops, led to the continued occupation of the old infantry barracks. The energetic efforts of local authorities, both executive and administrative, to mitigate, as far as practicable, the defects inherent in both barracks and site, have lessened the evil, and reduced the sickness and mortality from its former colossal proportions to an Indian average. But the conviction of the inherent defects of site is so strongly impressed on the minds of men conversant with the hygienic bearings of the question, and the probabilities of securing at all times an efficient executive and a judicious administrative so slight, that nothing short of absolute abandonment will secure the troops from the recurrence of fatal epidemics. The present unsettled state of the question will, it is hoped, justify a short notice of its past Medical history and present state, modified as it has been by extensive alterations and some improvements. This is so concisely given in the following note from Dr. Maclean, now Professor of Medicine in the School at Fort Pitt, and previously for many years Residency Surgeon at Hyderabad, that it is desirable to give it in his own words. Dr. Maclean says:—

"'There is not in the whole history of barrack accommodation for British troops a sadder record than that of the infantry barracks at Secunderabad. Up to the year 1837-38 they were probably the worst then existing, and the mortality in them, chiefly from epidemic dysentery, had for years been so shocking as to give them throughout India an infamous notoriety. But not only were the barracks bad, the site on which they stood was so obviously unsuitable that it had been condemned, with a single exception, by every regimental and administrative Medical officer both of Her Majesty's and the Indian army, who had either been quartered at the station, or been called on to make an official report on the subject. *The concurrence of Medical opinion on this subject is very remarkable. Just as remarkable is the well-known fact that all the weight and influence of military men was thrown into the opposite scale.* Inspectors-General Macleod and Burke, of Her Majesty's service, men of reputation and ripe experience, assisted by Medical officers of local knowledge, investigated the causes of the mortality in these barracks with the utmost patience, and, after condemning the buildings which then existed as contrary to every sanitary principle, as unfit, indeed, for human habitations in any climate, they pronounced the site to be "the worst within many miles," urged the authorities, who then had it in contemplation to re-construct the barracks on a better plan, to select a better position. Unfortunately this good advice was not followed; Government, acting chiefly on that of the brigadier who commanded the station, rebuilt the barracks, at a great outlay of money, on the old and ill-starred site. The new buildings were occupied in 1838-39. They were an immense improvement on the old, and for a time were much more healthy.

"'The good reputation of the new buildings was, however, short-lived. Dysentery continued to scourge regiment after regiment quartered in them, with a violence as severe and a mortality as great as in the worst years of the old buildings, and again Medical officers, both regimental and administrative, inveighed against the site. The old conflict between military and Medical opinions revived; the former attributing the sickness and mortality to every cause but the site—now to the "vicinity of the graveyard," anon to the "water," then to the "drains;"—some commanding officers insisted that the "toddy tope" was solely at fault; others were of opinion that "green vegetables" were at the root of the evil; others were equally certain that "change of season" caused the sickness of which the doctors complained; while not a few insisted that if temperance could only be maintained by the strong arm of military discipline all would be well! All these evils were with more or less success dealt with, and, what is more, money was lavishly spent upon the buildings to meet the wishes of officers from time to time in command. Still the evil went on, and still the Medical officers, strongly supported by the various inspectors of Her Majesty's service, and the Medical Board of Madras, protested against the site, and the locating of troops in a position of such proved insalubrity. The question at last attracted the notice of the Court of Directors and of Parliament, and the Madras Government appointed a commission of Medical officers with a member of the Medical Board as president to make a final report on the whole question. This Board reported on December 16, 1853, —"That the site of the barracks was unhappily selected; that the plan of the existing buildings is such as not to admit of proper circulation of air, more especially in such a confined situation; and the Commissioners considered that a new barrack should be erected on an elevated and open site, where the periodic malarious influences would be less likely to become concentrated."

"'The Madras Government entirely concurred in this opinion, supported as it was by a mass of evidence, the sum of which was conclusive in support of the opinion of the Commissioners, who were accordingly directed, in conjunction with some military officers and the engineer of the Hyderaban subsidiary force, to select ground for the new barracks which were at once sanctioned. The site of Trimulgherry was chosen; and the splendid barracks which now stand there were constructed.

"'It was fondly hoped that as soon as these buildings were ready, the old ones would be for ever abandoned. Just, however, as they were nearly completed, the mutiny of the sepoys of the Bengal army broke out, and a "State necessity" of an overpowering kind arose for increased accommodation. Under this pressure, the 1st Royal Regiment was put into the old barracks with the usual result—a terrible loss of life from dysentery. At this date, the buildings are occupied by a regiment of dragoons, and, spite of what has been so often recorded, are likely for many years to be used. It is this circumstance which gives interest to the latest Topographical Report, descriptive of a locality so infamous.'

"Dr. Maclean might have added, with equal truth, that within the last three years the money expended in alterations, and the life unnecessarily sacrificed, would have more than sufficed to house the dragoons in good barracks on an eligible site. That these statements may not go forth unsupported, the following return compiled from an old Madras Report is appended:—

Average Annual Strength, Admissions, and Deaths among the European portion of the Troops stationed at Secunderabad during the Thirty Years' Occupation of the first or old Infantry Barracks—viz., from 1804 *to* 1833 *inclusive*:—

Average annual strength.	Admissions.	Deaths.
752·8	1863·06	63·76

"This is sufficiently startling when contemplated as the average result of thirty years; but when the return is further examined, and it is found that in some years, as in 1815, the mortality was *nearly one in every three of the strength, and that even as late as* 1826 *it was nearly one in every five*, some adequate idea may be gathered of the sacrifice which has been made here to the presumed superiority of military judgment.

"Finally, new barracks replaced the old on the same site. Dr. Maclean states these were a great improvement—and so no doubt they were. Fortunately, the results can be shown. From a return furnished by Mr. Hearn, Surgeon of the 1st Royal Regiment, and extending from 1837 to 1858, it appears that out of an average annual strength of 834·44 occupying these barracks, the admissions into Hospital were 1529·40, and the deaths 37·20. The last statistical illustration furnished is a still clearer proof of the irremediable insalubrity of this site, notwithstanding the latest improvements, and the enormous outlay consequent thereon. Mr. Hearn states that the 'Royals,' averaging 1098, had 2497 admissions into Hospital during the year 1858, and that of that number 104 *died—being nearly* 10 *per cent. of the strength*. This experienced officer says, 'The present improvements will prove, like those adopted from time to time in former years, a waste of money, as it is the locality, not the buildings, which is malarious,—and no outlay can ever make them healthy.'

"Many portions of the buildings have since been removed. Old and very objectionable privy accommodation and ablution-rooms have given place to more modern ones. Open nullahs and ditches have been converted into covered drains and sewers, and the number of men in barracks has been reduced nearly one-half. Still zymotic diseases prevail to such an unusual extent, as to justify the successive generations of officers of the Army Medical Department in adhering to the opinion that the inherent defects of the site are irremediable."

POPULAR MEDICAL ERRORS.

In a recent article we noticed certain popular errors connected with infancy and childhood, as well as some of the more striking prejudices for and against different Medicinal remedies. We will now notice some *diseases* which are the subject of more or less popular misconception. Gout, for instance, is regarded too exclusively as a disease of respectability and high-feeding. Scarlatina is looked upon, not as identical with scarlet fever, and equally formidable in its possible results, but as a mild, harmless form of that disease. "The public," observes Dr. Watson, (a) "mistake the Latin and scientific name for a mere diminutive. . . . I always disabuse them of this absurd error when the opportunity of doing so occurs. It can produce nothing but confusion and disregard of requisite precautions." Cutaneous eruptions are nearly always interpreted by the non-Professional public as eliminative in their intent, *i.e.*, as efforts of nature to throw off some impurity or abnormal ingredient in the blood. Where a specific poison is at work, as, for instance, in the febrile exanthems, syphilitic eruptions, etc., the popular theory is probably true. But it is too often, and with mischievous results, applied to that large class of skin diseases which are due to mal-nutrition from a somehow defective diet. These latter diseases are of course the expression not of impurity, but of poverty of blood, and need for their cure not the popular "purifiers" (salts, sulphur, etc.) but such a diet as will supply to the blood those elements of nutrition in which it is deficient. Possibly the diet has hitherto comprised too little fruit and vegetables; then the addition of these to the ordinary food suffices for a cure. As to the *modus operandi* of these articles of diet, the vulgar are in the dark. They are supposed somehow to "cool" or to "purify" the blood. The notion of their supplementing those elements of nutrition which the blood needed seems to be ahead of the popular pathology of the day. Speaking of fruit, we would notice the common impression that it is the main cause of summer and autumn diarrhœa. Unripe fruit is unquestionably apt to upset the bowels, but we hold ripe fruit, eaten in moderation by a healthy person, to be wholly guiltless of any such tendency.

There are several popular delusions connected with phthisis. (1.) It is often believed to be contagious. And this is not surprising. Cases of its apparent communication from person to person are so common, and sometimes so striking, that they could hardly be otherwise interpreted by those who are unacquainted with the real nature of that disease. Suspicions of its possible contagion are here and there entertained even by members of our own Profession, but, so far as we can learn, on insufficient grounds. In this country the contagion of phthisis is supposed to operate only under peculiarly favourable circumstances, such as close personal attendance upon, or constantly sleeping with, a person so diseased. It is far otherwise in Italy, Spain, and some other countries, where consumptives are shunned by their fellow-creatures almost with the same horror as were the lepers of old, and even their clothes, bedding, etc., burnt after their death. (2.) In the malarious parts of England consumption and ague have long been regarded as antagonistic diseases, so much so that residence in an aguish district is sometimes recommended as preventive and arrestive of consumption. Dr. Peacock some time ago showed that nothing can be further from the truth than such a notion. His well-known researches have rendered it certain that consumption and ague often co-exist in the same person; and further, that ague, or a malarious atmosphere, so far from being preventive or arrestive of consumption, tend rather to generate the disease and advance it the more quickly to a fatal termination. (3.) But of the popular errors about consumption, perhaps the most common and most mischievous is the supposed influence of climate upon this disease. The popular belief is that consumption is more rife and more rapidly fatal in northern than in southern latitudes, and therefore that the first desideratum for a consumptive northerner is either residence under a southern sky, or, if this cannot be had, at any rate a cautious avoidance of the supposed pernicious influences of his own climate. This idea of a necessary connection between consumption and a cold, wet, variable climate is quite at variance with the facts of common experience as well as with the results of statistical research. It is notorious that many consumptives are invariably better in winter than in summer, and that change to a warmer climate is found only to aggravate their disease. It is also notorious that those who are over-cautious in avoiding exposure to atmospheric changes are by no means the class of consumptives who bear up longest against their malady. Again, statistical researches of late years prove beyond question that consumption, so far from being peculiar to cold, wet, and variable climates, exists in all latitudes, and that, as a rule, the further we go south, the more rife the disease, and rapidly fatal its progress. So that, in spite of popular (and to some extent even Professional) prejudice, it is impossible to avoid the conclusion that warmth is by no means necessarily beneficial in consumption, but often the reverse; and that cold, so far from being necessarily hurtful, often tends, by its invigorating effect on the system, to ward off the disease, and arrest its progress when already developed. In the causation of disease, cold is too much of a popular scapegoat. All sorts of evils are laid at its doors, of which it is wholly innocent. In the early stage of consumption, for instance, the cough is invariably attributed to "a cold;" any aggravation of the chest symptoms, due perhaps simply and solely to an accession of fresh tubercular deposit, is sure to be put down to "a *fresh* cold," and is only too apt to make the patient shut himself up in a warm, confined room, and avoid as his worst enemy that which is really his best friend, viz., fresh air. Again, when a patient catches fever, when he is going wrong after a Surgical operation, when inflammation is terminating in suppuration, the occurrence of the rigor is sure to be set down by the poor patient as evidence that he has caught "a cold" or "a chill."

(a) Watson's "Lectures on Physic," vol. ii., p. 897. Fourth Edition.

(4.) There is another popular error about consumption,—the result of a very common, but very fallacious, way of generalising from statistical data. People see and hear of more deaths from consumption among the young and middle-aged than among the old, and therefore infer that consumption is a disease almost exclusively of early and middle life. They compare the phthisis mortality of one period with that of another, instead of comparing the phthisis mortality of each period with the number of persons then living. The Registrar-General's reports teach us that, in proportion to the number of old men living, consumption makes just as great havoc among them as it does among the young and middle-aged. The mistake is the same as if, on comparing the annual mortality in a small and a large town, one were to conclude that the town where most deaths had occurred was necessarily the least healthy of the two.

(5) A very general, but, as Doctors know, most mistaken, impression prevails about the usual mode of death in consumption. It is kept alive by those novelists who, drawing upon their imagination for facts, are wont to picture the last hours of a consumptive patient as a sort of sunset in a calm, cloudless sky. The dissolution is a falling asleep, "a gentle wafting to immortal life." The road to the long home is made all "smooth, easy, inoffensive;" no up-hill, no roughness, nothing to disturb the tranquillity of the departing soul. The face, of course, is an index of the mind, serene, collected, and (if a young lady's) beaming with unearthly beauty. Oftener than not, the dying patient improves the occasion with much effusion of religious sentiment. Such, or something of the kind, is the conventional death-bed in novels. In nine cases out of ten, what are its grim realities? A tearing cough; a hard, unceasing fight for breath; a wan, distorted face; a mind too distracted by present suffering to dwell much either on thoughts of the past or hopes of the future.

Of all popular Medical errors, the most common, mischievous, and inveterate are those which affect the hygiene of daily life. A consideration or even enumeration of such errors would carry us far beyond the limits of an Editorial article. We shall merely mention what seem to us their two most important classes, viz., hygienic neglect of house and person. The former is exemplified in the horror which the lower orders have of admitting fresh air into their dwelling or sleeping-rooms; their non-appreciation of the value of light and cubic space; their listless indifference to privies, foul drains and sinks, dust-heaps, and other collections of decaying organic matter, which may be reeking poison, under their very eyes and noses. The latter shows itself in the often loathsome personal habits of the poor, as, for instance, in their common reluctance to wash their bodies, heads, or feet for days, aye, weeks together, and in using the same bedding and under-clothing, such as flannel-waistcoats, drawers, and stockings, till they become soaked and stiffened with the refuse of their grimy skins. *Apropos* of stockings, an eminent member of our Profession lately told us a fact which had occurred in his own experience. A lady (we suspect a *bas bleu*), daughter of a military officer, once gravely stated to him her belief that a well-worn stocking, saturated with perspiration, and put round the throat at night, was the best remedy for a sore throat. A piece of nastiness strikingly parallel to this lady's suggestion was the popular remedy which Dean Swift mentions for the "vapours." In his "Directions to Footmen" he says: "Never wear socks when you wait at table, on account of your own health, as well as of those who sit at table, because, as most ladies like the smell of young men's toes, so it is a sovereign remedy against vapours."

These sort of hygienic errors appear to be due partly to dirty, negligent habits, partly to fear of taking cold, but not unfrequently to the notion of a healing or nourishing effect to be got from keeping bathed in the miasmata of their own bodies, just as pigs are popularly supposed to thrive better when allowed to wallow in their own mire. Their loathsomeness is not the worst of these two classes of popular errors. Epidemiological research has clearly proved that they not merely foster and aggravate all diseases, but actually call many of them into existence. Especially are they the very *fons et origo* of those diseases which we call zymotic. So that if these diseases are to be kept down to a *minimum*, our first aim must be to get the poor to eschew the habits we just mentioned. For the encouragement of personal cleanliness nothing has done and will do so much as the establishment of public baths and wash-houses, especially in the midst of a poor, crowded, non-washing population. Persuade a man to give himself the luxury of a clean skin, he will hardly like to put on a dirty shirt. With a clean skin and a clean shirt it is more than mere ring upon words to say that he is less likely to do a dirty action. For promotion of the general hygiene much has been attempted, and we believe done, by the distribution among the poor of those plain, practical little tracts issued by the Ladies' Sanitary Association. Miss Nightingale's "Notes on Nursing" have helped to dissipate a host of hygienic errors. It is only a pity that her book is too expensive for wide circulation among those who would profit most by reading it. We take this opportunity of once more protesting against the narrow-mindedness of regarding with disfavour the popular study of physiology and hygiene; as though such studies encroached on the peculiar province of Medical men, or tended to loosen their hold over their patients. The popularising of these studies has everywhere proved as great a gain to the Profession as to the public. Their tendency has been to teach people not to treat disease, but to shun its avoidable causes. The treatment of disease remains as much as ever in our own hands, and has the better chance of success in proportion as we have less ignorance and prejudice to contend against.

Lastly, we must never forget that, whether by book or by mouth, it is useless preaching to the poor on these subjects, unless we practise what we preach. The rich must set the poor a good example. Servants must see and be made to observe habits of cleanliness and hygiene in their masters' houses; they will then carry away those habits with them when they leave and keep houses of their own.

(To be continued.)

THE WEEK.

RECOVERY OF GENERAL GARIBALDI.

We are informed on the best authority that Professor Partridge has received a letter from General Garibaldi, dated Caprera, August 6, in which the General states that his leg is now almost well.

THE CASE OF COX *v.* FEENEY.

Professor Sands Cox, than whom no man deserves more honour as the founder of the Queen's College and Hospital, Birmingham, has lately appeared before the public in the unenviable position of prosecutor in an action for libel. The defendant is the publisher of the *Birmingham Daily Post*, and the libel complained of was a report by Mr. Martin, an inspector sent down by the Charity Commissioners to investigate the condition of the College, together with numerous articles and letters reflecting on Mr. Sands Cox. The origin of the inspector's visit and report was a letter addressed by Dr. Blunt, who in 1859 filled the office of Dean of the Faculty in the College, to the Bishop of Worcester in his capacity of visitor. In this letter complaints were made of the conduct of Mr. Cox in the management of the College. As Dr. Blunt declined to indemnify the bishop against the costs of an inquiry, the matter was referred to the Charity Commissioners, who sent down Mr. Martin to investigate Dr. Blunt's complaints. From Mr. Sands Cox's evidence it is clear that the Medical Department of the College has been by no means in a flourishing condition. On his cross-examination, it appeared that there were only twelve students, although a less number than twenty-five caused a positive loss. It had been found necessary to apply the sum of money left by Dr. Warneford for the Warden to the general purposes of the institution. Those who know the difficulty of maintaining a small School of Medicine, even in London, will sympathise with Mr. Cox in the difficulties which have surrounded him at Birmingham. We regret much the publication of the whole case, as it cannot but seriously injure the establishment to which its founder has devoted all the best energies of his later life. The jury found a verdict for the defendant, there being no proof that the report was published with a malicious intention, or was other than *bonâ fide.*

THE REGISTRAR-GENERAL'S REPORT.

The last quarterly report of the Registrar-General presents two principal features—an unusually high birth-rate but also an unusually high rate of mortality. The annual birth-rate was 3·705 per cent. against the average 3·587. On the other hand, the late prevalence of small-pox, scarlatina, diphtheria, and measles, has seriously checked that improvement in the public health which had signalised the past two years. In the last three months of 1862 the mortality rose; it continued high in the first quarter of the present year, and has since been above the average. In the June quarter the death-rate was 2·313 per cent. per annum, while the average was 2·191. With the present exception, a spring quarter has not occurred since the year 1853 in which the rate of mortality was as high as 2·3.

The following shows how widely spread have been the conditions favouring the production of small-pox :—

"Small-pox was not confined to London; its presence, which assumed in some instances a character of virulence, is announced by registrars in many and distant parts of the country. The following are the chief districts, parishes, or townships where the attack was of sufficient importance to procure a notice in the reports of the local officers:—In Surrey, Croydon and Godstone; in Kent, Maidstone and Rochester; in Berkshire, Reading and Kinsbury; in Bedfordshire, Wing (Leighton Buzzard); in Essex, West Ham, Orsett, Rochford, Manningtree, Colchester, and Sible Hedingham; in Suffolk, Cavendish; in Cornwall, Bodmin, Truro, Redruth, and Penzance; in Warwickshire, Kilsby; in Lincolnshire, Gratham, Market Rasen, and Misterton; in Derbyshire, Derby and Glossop; in Cheshire, Stockport; in Lancashire, West Derby, Wigan, Didsbury, Chorlton-upon-Medlock, Manchester (where it was very prevalent), Ashton, and Oldham; in Yorkshire, Barnoldswick, Ripon, Harrogate, Wetherby, Yeadon, Elland (Halifax), Shipley (Bradford), Bramley, Leeds, Dewsbury, Barnsley, Ecclesball, Bierlow, Sheffield, Bramham (Tadcaster), York, Sculcoates, Hull, Whitby, and Northallerton. In the northern counties, Stockton, Yarm, Bishop Auckland, and Chester-le-street. Fear of the disease, minatory notices issued by guardians, or the infection of example have given a useful stimulus to vaccination in many places where it had been opposed by prejudice or had sunk into neglect."

A NORTHERN ACCOUNT OF CONFEDERATE MEDICAL TREATMENT.

In a letter from the New York correspondent of the *Morning Star*, published in that paper on August 11, there is an account of the experiences of a Mr. Belshaw, a British subject, who was forced by the conscription to serve in the Confederate army. How far any portions of the tale may be worthy of belief we cannot say, but the following will scarcely receive credence even from the most enthusiastic supporter of the North. The correspondent writes :—

"I should not omit to say that he (Mr. Belshaw) gives some startling accounts of the utter indifference with which the rebels regard the rights of aliens. In the same guardhouse with him at Tullahoma were several foreigners. An Irishman of the name of Kelly was nearly drowned by being held head downswards in a hogshead of water; and another foreigner, a Dane, if I remember aright, upon applying to the Surgeon for a dose of medicine, was given some preparation which caused his death a very few hours after he took it. This may have been done through accident or ignorance, but as the man was peculiarly firm and obstinate in his refusal to do duty, Mr. Belshaw is inclined to think that the method was adopted as the easiest way to get rid of a troublesome customer."

The unhesitating manner in which murder is laid at the door of the Confederate Surgeon is just an instance of the absence of everything like moral scruple which characterises the statements of partisan writers on both sides. We only hope, for the credit of humanity, that the accounts of the horrible and disgusting tortures said to be committed by Southern masters on their slaves, which are given in the same letter, are as devoid of truth as we verily believe Mr. Belshaw's account of the practice of the Confederate Doctor to be.

LE DOCTEUR NOIR.

The notorious black Doctor, J. H. Vriès, has again encountered the penalties of the law at Paris. He has lately been tried by the Tribunal of Correctional Police on the charges of using the title of Doctor, and of illegally practising medicine. Quacks meet with little tenderness in France. We confess to doubting whether quackery will ever be put down by legal enactments alone; but it is really tantalising after the uncertainty and delays, the quips and quibbles of our own law, which seem to be increased by every new attempt to legislate on the subject, to witness the summary way in which our neighbours dispose of illegal Practisers on their health and pockets. A letter from Paris states that :—

"A Doctor, named Ebra, who sometimes assisted Vriès in his consultations, was charged at the same time with illegally vending medicines to their patients. Among the papers found in the possession of Vriès, and put in as evidence, was the prospectus of a work entitled 'Clef de la Nouvelle Alliance,' presented to mankind as 'the revelation of a new era which shall for ever close the abyss of revolutions, and put an end to all the sufferings, wars, and catastrophes afflicting nations.' In answer to questions from the President, Vriès declared that he was merely the assistant of Dr. Ebra, whom he aided with advice, while the latter signed all the prescriptions; he denied having ever sold medicines since his first condemnation, although he still had the drugs in his possession, which were returned to him after his first trial. The evidence, however, clearly proved that, although Dr.

Ebra lived in the same house, he was not always present at the consultations, and the fact of supplying patients with medicine was established against both the defendants. One witness proved that Vriès alone had attended a person named Piffetot, and had received from him 2000 f., with securities for the payment of 4000 f. more. After hearing counsel for the defence, the Tribunal condemned Vriès to 2000 f. fine, with six months' imprisonment, for illegally practising medicine, and to 500 f. fine for selling medicaments. Ebra was also fined 500 f. for the last-named offence, and condemned to pay one-fourth of the expenses of prosecution, the other three-fourths to be paid by Vriès."

It will be seen from the above that in France partnership with a legal Practitioner does not protect an illegal one. With us, on the contrary, it would appear, from a recent ruling of one of the judges, that it is only necessary that one partner should be registered to legalise a firm.

TYPHUS AND TYPHOID FEVER.

Dr. W. T. Gairdner, who now ably fills the post of Medical Officer of Health in Glasgow, has recently asserted in his Second Quarterly Report his conviction of the impossibility of checking typhus fever in the overcrowded houses of the poor except by early segregation of the sick. If the distinction between typhus and typhoid be as shadowy and unreal as some of our Dublin *confrères* would have us believe, how is it that every day brings fresh evidence of the highly contagious character of the former, contrasting broadly with the cases, few and far between, in which typhoid has been proved to have spread by contagion? Dr. Gairdner writes:—

"The books of my inspector show an aggregate number of 327 cases of fever (chiefly typhus fever) reported during the last three months, in all of which the localities have been officially visited, and such precautions have been taken as are suggested by experience against the spread of infection. It is greatly to be regretted that, owing to circumstances over which the authorities of the city have practically no control, intimation of fever cases is often given much too late to secure the full benefit of a sanitary inspection, or even of those very elementary precautions which can be put in force at a moment's notice against the spread of infection. It is no uncommon thing, for example, for fever cases to run a course of a week, or even a fortnight before they are discovered in the houses of the poor; nay, it is to be feared that some are never discovered at all, and that Medical assistance is only sought when two or three of a family have been taken ill, and when, in all probability, contagion has been at work for weeks in the infected locality. From inquiries made of one of the best informed district inspectors of poor, I am quite satisfied that many fever cases, even in the worst possible sanitary circumstances, in the most over-crowded houses, in the midst of neglect, filth, and wretchedness, are not, and some of these cannot be, removed to the Infirmary. I am equally well satisfied that so long as this is so, and so long as healthy persons are unwittingly or unavoidably exposed to the contagion of fever in over-crowded and ill-ventilated apartments, sanitary visitation can only be an imperfect check upon the spread of this disease. The strong convictions I entertain on this subject, and the very decided support afforded to those convictions by the facts of the present epidemic, have induced me to recommend a more stringent application than heretofore of the new powers conferred by the Glasgow Police Act in two of the most notorious fever localities; and I shall be guided by the effect of these recommendations in making further efforts in the same direction."

FROM ABROAD—THE REPORT ON VIVISECTIONS—ANIMALCULES OF THE BLOOD IN SPLENIC APOPLEXY—BARON LIEBIG AND THE PERFUMER—EPIDEMIC OF OTITIS—FEES PAID BY ROYALTY.

The report on vivisections from the pen of the late M. Moquin-Tandon has not been withdrawn as rumoured, his family only desiring to possess his last written production after it had been laid before the Academy. It has not yet been published, but, judging from the opinions of those who have heard it read, and the conclusions with which it terminates, it is a fair and moderate document. It is true that it states nothing new, only enouncing what is now generally admitted by the Profession, and was so admirably expounded by Dr. Sharpey in his "Address on Physiology," namely, that while experiments upon living animals are essential to the progress of physiological and pathological knowledge, their wanton and unnecessary performance, and their needless repetition, are to be most severely reprehended. It is, however, of some importance that the just limits within which the taking of animal life, and the infliction of suffering, are allowable, should be stated by so authoritative a body as the Academy of Medicine; and we shall watch the discussion which is to take place on the report with much interest. The following are the conclusions of the report:—

"1. Vivisections are indispensable to physiology, and operations on living animals are necessary for learning the manœuvres of operative medicine in the veterinary art. 2. They should be undertaken with reserve, and the greatest care should be taken not to give them a character of apparent cruelty. 3. The experimenter should always have in view a real progress in science. 4. Students should not perform experiments except in the great centres of study, under the direction of the Professors. 5. Every means at the disposal of science for the diminution of pain should be put into requisition by the experimenter."

We must take objection to the portion of these conclusions which maintains that *operations* need be performed on living animals; and it will be remembered that it was the recklessness with which these were executed at Alfort that first aroused public indignation in this matter, and led to this investigation.

M. Davaine, the eminent zoologist, has narrated to the Academy of Sciences the result of his investigations upon the subject of splenic apoplexy, a disease which proves so fatal to sheep, and especially to lambs. Examining the liquid blood in six of these animals the subject of this disease he has found it to contain in all of them infusorial animalcules, the *bacteria*. What relation of cause and effect these may possess is a matter of speculation and further investigation; but, at all events, they are not connected with the setting up of the putrefactive process, as the blood examined was quite unchanged; and when putrefaction afterwards ensued the *bacteria* entirely disappeared. M. Davaine is about investigating the condition of the blood in various epidemic and endemic affections.

Our analysts and chemists have been somewhat severely taken to task for the facility with which they accord to speculating tradesmen certificates of purity concerning articles submitted to their examination. These are afterwards employed in puffing and pushing the sale of substances which may or may not resemble those reported upon. It is somewhat difficult to know how a chemist can guard himself against such an abuse of a testimonial, which, while he pursues his avocations, he can hardly refuse. Still, there must be a limit somewhere in these compliances, and the extent to which such limit has been transgressed by a distinguished chemist will excite not a little surprise. One Herr Kron, a celebrated Munich perfumer, announces the discovery of a most valuable wash or cosmetic, which, in a most perfect and harmless manner, removes every impurity, whether of breath or skin, by reason of the oxygen it contains in the form of "Fluid Ozone." This might pass very well as one of the humbugs of the day, the wash in question being only a watery solution of the permanganate of soda, whose disinfecting properties has long been known; but one is somewhat startled to find the following certificate bolstering up the sale of a dear nostrum under a false chemical denomination:—

"I willingly testify that the preparation designated 'Fluid Ozone' is completely harmless, and that, by reason of its great utility and efficacy, it is worthy of every recommendation. "Justus v. Liebig."

M. Bonnafont, a distinguished Paris aurist, states that he has of late found inflammation of the external auditory canal assuming quite an epidemic prevalence, presenting some analogies with the furuncular epidemics observed of late years. When this passage is affected in the ordinary run of cases, it is the portion near the membrana tympani which suffers; but in the cases in question the more external parts of the canal have been most liable to the inflammatory action. This has a great tendency to go on to suppuration, the deeper tissues of the canal becoming involved, and the suffering being very great. The canal becomes tumefied and obstructed, and a dangerous accumulation of pus may take place. The giving free exit to this, by means of probes and canulæ, is of importance, as the membrane may otherwise become ruptured. When the case is seen early, and it is promptly treated by leeching and scarification, suppuration may be prevented.

The fees paid by Royal personages are always an interesting matter of record, serving to some extent to indicate the appreciation of the Profession at different periods. The fee of £4000 said to have been paid to Mr. Thompson by the King of the Belgians, and well deserved by him for having saved one of the most valuable lives in Europe, rests at present only on the *on dit* of a Brussels journal, which at least we hope will prove prophetic. It is stated on good authority, however, that Professor Scanzoni has received 30,000 francs (£1200) for a fortnights' attendance on the Empress of Russia at St. Petersburg.

THE BRITISH MEDICAL ASSOCIATION IN BRISTOL.

SECOND DAY'S PROCEEDINGS.

On the forenoon of Thursday, a Council meeting of the Association was held, after which the members in great numbers met in the Victoria-rooms, under the presidency of Dr. Symonds.

The **President** said that the Council had come to a resolution to recommend that the next annual meeting should be held at Cambridge, and no doubt they would rejoice when that was placed formally before them as an invitation. They might say that they were an incomplete society until they had held meetings at both the great Universities of this country. They had held meetings at Oxford, but never at Cambridge.

Dr. **Humphry** then formally proposed that the meetings for 1864 should be held at Cambridge, and that Dr. Paget, of that place, should be appointed President elect.

Sir **Charles Hastings** seconded the resolution, and considered that the place of assembly, as well as the gentleman proposed for President, were both appropriate.

The resolution was carried *nem. con.*

Dr. **Paget** expressed his thanks for the honour conferred upon him, and said that he should have great pleasure in doing what in him lay to make Cambridge agreeable to the members of the Association.

Mr. **Husband** read requisitions which had been drawn up and addressed to the Right Hon. the Earl de Grey and Ripon and the Duke of Somerset, relative to the grievances under which the army and navy Physicians and Surgeons suffered through the warrants constituting them officers of equal rank with their combatant brethren being virtually set at nought by the commanding officers. The requisition expressed a wish that the grievances might be remedied, as especially in the case of Assistant-Surgeons they were severe, and tended to prevent intelligent and educated men entering a field of labour where they were denied the rank due to them.

Dr. **William Budd** then proceeded to read the address in Medicine. In complying with the request of the Association, he should follow the example of his predecessors, and confine himself to a single theme. The one he had chosen bore on the subject of epidemics. There were few secrets in nature which it was of greater moment to penetrate than the rise, spread, and deadly power of these terrible scourges. Among our many natural foes they were the most numerous and the most fatal. In the aggregate, take the world through, they caused more untimely deaths, more sickness, more sorrow, more loss of labour—bodily and mental—than any other ills to which humanity was subject. They attacked us in our cradle, they pursued us through youth and manhood, in old age they still lingered about our path. They were among our greatest hindrances in the battle of life, even when they did not end it by a sudden and invisible stroke. To rescue manhood from the grasp of epidemic disorders should therefore be the settled, as it must always be the highest, ambition of their art. Growing attention had been paid of late years to this great subject in England, France, and Germany, but, unfortunately, the advance of knowledge bore, as yet, but scant proportion to the efforts spent in its pursuit. This, as it appeared to him, might be mainly traced to two causes—an exaggerated estimate of the difficulties of the subject, and the want of clear views as to the method to be followed in its investigation. The difficulties were obvious. The material causes of epidemics were invisible, and the laws which governed invisible things must needs be hard to make out. But that they might be perfectly explained was clear, because invisible powers of Nature, such as gravitation, were the very powers of which our knowledge was the most sure and precise. On the other hand, the problem of the epidemiologist had at least one element of simplicity which was denied to the student of other diseases—its chief concern was with the history of a single cause. He deprecated the practice in vogue of accumulating a mass of statistical details—meteorological, physiological, topographical, and others relating to the particular epidemic which might happen to be in question, with the most impartial indifference as to whether these details established anything of importance or not. Statistics left the really vital questions almost untouched, as neither on the mode of being of the morbific agent without the body nor on its mode of action within did they throw any but a dim and distant light. The only sure way of proceeding obviously was to begin with the study of types which in their action offered something tangible. They should start with the study of the contagious group, and those diseases of that group which, from peculiarities in the mode of evolution of the virus, admitted of artificial propagation, which offered, in other words, the incomparable advantage of being studied experimentally. He would further wish the sufferers under his own eye, their incomings, outgoings, and intercourse with one another known to him, or better still determined by him. These were conditions not to be met with in human life, and only in the case of domestic animals. The pest to which he was about to refer was new to this country. For a century at least nothing had occurred in the island more deeply instructive to epidemiologists than the remarkable outbreak of the disease popularly known by the name of "small-pox," which ravaged the Wiltshire flocks last autumn. On September 13, 1862, while the disorder was still rife, he visited the diseased flocks, and enjoyed the great privilege of studying the malady from life, under the able guidance of Professor Symonds. As there were still at the time some 600 or 800 patients in all stages of the disorder, it was not difficult under such able teaching to become acquainted, even in the short compass of a single day, with its leading characteristics. The speaker passed on to remark that he would lay before them the salient points of information which he then acquired, together with some reflections since suggested to him by the study of the disease in veterinary works. He, however, said that he should not treat the subject in its bearing on agricultural interests, but confine himself to its purely scientific and Medical aspects. The very name which the distemper bore — small-pox in sheep — attested its human interest, as the series of relations which suggested the name attested the entire applicability of any inferences drawn from it to the great and important group of which human small-pox was the type. With a brief allusion to the history of the disease, the speaker passed on to say that it would be enough for them to bear in mind two points: first, that from time immemorial the disease had prevailed in almost every part of the whole world; but that until seventeen years ago, with, perhaps, one doubtful exception, it had remained entirely unknown in this country. He observed that before 1847 the whole number of foreign sheep imported amounted only to a few hundreds, and those selected with care, to ensure freedom from disease. A few years after the number had grown to several hundred thousand, and the sheep, instead of being picked out, were sent wholesale to the English market by the foreign flock-masters. Quarantine had fallen into discredit, and contagion came to be looked upon as of small account. The want of acquaintance with the epidemic maladies of foreign live stock, and other concurring causes were detailed, in order to show how contagion had entered into the English from diseased foreign sheep, after which the characters of the disease were slightly dwelt upon, reference being made to sketches, and a parallel drawn between the human and ovine eruption. The facts connected with the outbreak, its rise, and suppression were then stated, and, after a reference to inoculation, it was remarked that, free from all ambiguity, the great fact was revealed that it was in the body of the sheep that this strange poison was fashioned and multiplied. It was noticed that the facts recorded showed a repetition in one of the lower animals of a series of relations observed in another and kindred disease in man. They had, as the result of experiment, that the virus of variola ovina was bred in the body of the sheep. By the same means it had been ascertained that such virus was incapable of breeding in the body of any other animal, or at least of the great group of animals familiar to them, which, like sheep, came in relation with their daily life. Yeomen and shepherds fed largely on mutton—men whose bodies might not inaccurately be described as consisting in great part of mutton built up into man—might be seen there handling the diseased animals in all manner of ways with perfect impunity. Having narrated several facts, the speaker said it became interesting to inquire in what way the germ of the disease was transmitted from one flock to another. The virus might have been conveyed first by flies, or by starlings, from the diseased to sound sheep; second, by men who had visited diseased flocks; third, by sheep themselves from the infected district; fourth, by atmospheric dispersion by the diseased animals. He spoke approvingly of the stringent measures that had been adopted to check the epidemic, which had been successful, and observed that the events in Wilts were of incomparable value, as showing by data, which were scarcely inferior in severity and precision to those of the exact sciences, the entire fallacy of views entertained in the case of contagion in the human family, that some new element had come into play of an entirely different order from those which were in operation when the extension of the disease was confined to a single group. Every other element was there before, but clavelee never. The germ of the disease was introduced, and the result followed which he had related. He showed that the variola ovina bore the same relation to human small-pox as two kinds of thistle or of mushroom to one another, as two species of algæ, identical in all the laws of their growth, but yet specifically different. He asked, however, whether, although specifically different, there might not after all be some genetic connexion between them. In conclusion, he applied the truths his paper was intended to illustrate to the contagious fevers of our race, referring specially to typhoid and scarlet fevers; and he argued that as the poison issued from the infected bodies it was possible entirely to destroy it, and thus bar the succession of disease from others. For his own part, he never saw the exuviæ which contained deadly seeds carelessly cast loose upon the world without thinking how many homes might possibly be made desolate by that single act, and how great was the inconsistency which passed Acts of Parliament, and imposed heavy penalties to prevent the destruction of some 500 or 600 lives by arsenic and other poisons, and yet allowed a poison which destroyed its 20,000 annually to work its will upon the people. He finished by commending the important subject which they had been considering to his Medical brethren in eloquent language, and sat down amidst repeated bursts of applause.

Dr. Radcliffe Hall proposed, and Dr. Richardson seconded, a vote of thanks to the speaker, which was carried by acclamation.

Dr. G. Budd next read a paper on "The Efficacy of a long course of Nitric Acid in reducing the Enlargement of the Liver and Spleen that sometimes results from the Syphilitic Cachexia." The speaker said that the subject treated, although apparently of a limited kind, was of most general application, and if he had not thought so, he would not have brought it before the meeting.

Papers were likewise read on "The Abstraction of Blood as a Remedy," by Dr. B. W. Richardson; and on "Vaccination, and the best means of extending it," by Mr. T. S. Fletcher.

THE ADDRESS IN SURGERY.

Mr. Augustin Prichard gave the address in Surgery, an able paper on Carbuncle: its spread and progress, and its method of treatment. When they considered that 1600 deaths had resulted from carbuncle in nine years; as many as 300 in one year, and the majority of cases adult men, out of whom, if properly treated, many might have been saved, he thought it a subject not unworthy of the consideration of that Association.

Mr. Turner, of Manchester, moved a vote of thanks to Mr. Prichard. He remarked that he had been clerk to his father during his pupilage at St. Peter's Hospital, and though he was entitled to every eulogium that could be passed upon him, yet he could unhesitatingly say that they had a perfect representative of him in his son.

Mr. Spencer Wells, of London, seconded the motion, which was carried by acclamation.

Mr. W. M. Clarke, of Bristol, next read a paper on "Excision of the Knee-joint."

Mr. T. S. Fletcher next read a paper on "Vaccination, and the best means of extending it."

Dr. Graily Hewitt followed with a dissertation on the operation of transfusion in obstetric practice.

Dr. Richardson bore testimony to the ability of Dr. Hewitt's paper, and the importance of the subject, remarking that there was no danger whatever in the transfusion of blood, if carefully done.

Dr. G. D. Gibb next read a paper giving illustrations of the causes of hoarseness and loss of voice; and

Dr. Morell Mackenzie followed with a paper on "Hoarseness and loss of voice treated by the application of galvanism to the vocal cords."

This concluded the business of the day.

GRATUITOUS MEDICAL ADVICE.

In the morning a meeting of some members of the Association interested in the establishment of village Hospitals was held, W. F. Morgan, Esq., in the chair.

Mr. Swete stated that the village Hospital consisted of a cottage, fitted up with a few beds, and having the advantage of a good resident nurse. Its object was to provide accommodation for the poor, the subjects of severe disease or accident, where they might be within convenient distance of a Medical man, still receiving the benefit of country air, and saved a long journey to a town Hospital.

Mr. Napper, who first established a village Hospital at Cranby, gave information as to the manner in which the Hospital in his village was conducted. Every poor person admitted pays something weekly towards the expenses of the institution, the amount decided by the manager of the Hospital, and the patient's employer, or the poor-law authorities. The claims for extra Medical fees, for accidents, due to parish Medical officers, are not interfered with. The general care of the patient is entrusted to the Medical officer; but when the patient has been previously under the care of any other Medical man, he is invited to consult on the case, and perform or assist in any necessary operations. The management of the Hospital was found to work best when entrusted to the Medical officer in conjunction with the clergyman of the parish, any larger committee being found unnecessary.

Some discussion ensued as to the question of payment for the Medical services obtained. It was argued that though the principle of payment for such services, however small, ought to be affirmed, yet the best means of carrying this out did not at present appear.

The meeting then concluded; and it was hoped that the attention given to the subject might result in gaining the opinions of other members of the Association, and in the opening of more of these useful institutions.

THIRD DAY.

The report of the Medical Benevolent Fund was presented by Dr. Marshall. Its main features were that in 1861 and 1862 the donations received amounted to £876, whereas in 1862 and 1863 they amounted to £1042. During the past year £882 had been granted, and a balance of £182 was in hand. Mr. Bartlett moved the adoption of the report, and Sir Charles Hastings, in seconding its adoption, observed that thirty years ago the Society was set on foot at Clifton.

The report having been adopted, Dr. Markham read extracts from the report of the committee appointed to investigate therapeutical matters, which having been agreed to, Dr. W. B. Herapath gave the address on "Chemistry in its Relations to Medicine."

ADDRESS ON CHEMISTRY IN ITS RELATIONS TO MEDICINE AND ITS COLLATERAL SCIENCES.

By **Wm. Bird Herapath**, M.D., F.R.S. L. and E.

(*Communicated by the Author.*)

Mr. President and Gentlemen,—When the members of your Council determined to select me for the performance of the highly honourable and responsible duty of addressing this important gathering of my Medical brethren, representing as it does the intelligence and learning of our extensive and most honourable Profession, it is deeply to be regretted that they could not also ensure the necessary leisure to prepare an address worthy of the occasion. Numerous avocations have considerably interfered with the preparation of this arduous work, which has been one of considerable difficulty from various causes; the introduction of this subject itself being quite an innovation in the practice of the Association, and, in fact, it is one hitherto untouched by any one previously on any similar occasion, whilst the purely technical character of the science might even in the generality of Professional minds fail to induce that interest and attention which all authors hope to produce in the persons of their audience. If, therefore, in the treatment of this subject I may have failed to give satisfaction to any of my numerous auditory, or if this address suffer by comparison with the highly wrought productions of our worthy and accomplished President, or of any other of those who have similar duties to perform for the other and more practical branches of our noble Profession, I trust that the members generally will give credit for my having attempted to make the subject as generally interesting as possible under all the varying circumstances of the case.

The science of Chemistry, although one of modern growth, is one having extensive bearings on all other sciences and branches of human knowledge. Arts, manufactures, and mines alike depend upon its teachings and discoveries for progress and support, whilst even geology, mineralogy, and astronomy must acknowledge that some of their sublimest discoveries have been due to the aid which Chemistry has accorded to them at some one period of their history. Metallurgy must necessarily depend upon the due performance of the chemical processes of reduction of the metals from the rough ores from Nature's storehouse; whilst the powers of the microscope, and the far-seeing mechanism of the astronomical telescope, alike owe their delicacy to the chemist who prepared the optical glass and the metallic supports of their various instruments. But Medicine is even more dependent upon her sister science than any one of those previously named; for she must not only prepare her medicamenta by chemical processes, but the very constitution of the patients' bodies would not be known without an appeal to the aid of the analyst, and the due performance of all the phenomena of life depends upon those silent, hidden, and mysterious chemical processes which go on continually in the natural laboratories of our own bodies, and without an adequate knowledge of which no Physician can hope to attain the power of alleviating those numerous ailments to which all alike are heirs, from the noble to the peasant, and from which even the Physician himself is not exempt. "The proper knowledge of mankind is man," and how much more necessary is it for the Physician to know himself. We will therefore devote the limited time at our disposal in the discussion of those topics of physiological and pathological chemistry which are more interesting at the present moment to the great bulk of our busy Professional brethren, and which might be presumed to come daily under their cognisance in the exercise of those duties which all appear to demand from us, more as a right than as a concession from the benevolent feelings of our heart to the common exigencies of our nature.

Chemistry teaches us that the organised kingdom of nature contains four elements, of which both animal and vegetable structures are chiefly composed; these are carbon, hydrogen, oxygen, and nitrogen, and, as you are all doubtless aware, many of the proximate elementary substances into which our various bodies may be divided by the skill of the analytical chemist consist of some three of these primary elements, such as, for instance, fats, oils, glucose, and dextrin, together with an extensive class of the animal acids.

Whilst from the vegetable world we have also a large number of proximate elementary substances having the same chemical elementary character, and of these woody fibre, cellulose, gum, and dextrin, starch, sugar, and alcohol, as well as acetic acid, may be enumerated. All these bodies have been proved to be formed of varying proportions of three elements,—carbon, hydrogen, and oxygen,—the number of atoms of which are variously arranged and grouped amongst themselves, and which molecular arrangement is sufficient to account to the scientific chemist for the different properties of the substances enumerated.

Some substances derived from both the organised and mineral kingdoms consist of only two elementary bodies, and of these oxalic and carbonic acids and carbonic oxide, in which carbon and oxygen alone enter into their composition, and water, in which oxygen and hydrogen can alone be discovered when it is absolutely and perfectly pure; whilst ammonia is often illustrated as a compound of hydrogen and nitrogen only, but recent views have determined that oxygen is also one of its constituents, so that now we agree to write it as NH_4O, instead of NH_3, as formerly.

In addition to these binary and tertiary classes of organic molecules there is a large and important class in which all four elementary bodies are combined to form one quaternary group, and of such are almost all the vegetable alkaloids, as morphia, strychnia, quinine, cinchonine, etc., whilst from the animal kingdom such compounds as urea, uric and hippuric acids may be enumerated. These are all characterised as nitrogenous bodies, as the atoms of the element nitrogen appear to govern the constitution and formation of the molecule.

Another smaller group contains sulphur in addition to these four primary elementary bodies. Such products are obtained from bile, and we may enumerate the tauro-cholalic acid, taurine, and cystine, occasionally procurable from urine.

Whilst from the brain we have the oleo-phosphoric and cerebric acids, bodies containing phosphorus as one of the primary elements of their compound molecule.

These illustrations are sufficient for my purpose, to bring back to your minds the truths taught you long ago, and thence to start on a fresh excursion into the component elements of the organic world, which will inform us that many other bodies absolutely require phosphorus, sulphur, chlorine, iodine, fluorine, and silicon as constituents of acids, or acid radicals, whilst they have either potassium, sodium, lithium, magnesium, or calcium, together with iron or manganese, and traces of copper acting as bases.

Most of these elementary bodies, though found in the various tissues of both vegetable and animal structures, are too often disregarded, as being too purely mineral for them properly to belong to an organised being; but of what use would the teeth or bones of any animal be without the phosphate of lime, which gives them strength and hardness, and the external skeleton of a crab, lobster, or an echinus equally requires the aid of carbonate of lime to give it permanence and durability.

It follows therefore from this brief epitome that there are nineteen or twenty elementary bodies of which organised beings consist, and further investigations devoted to the examination of the human organism alone prove that the same elementary substances are sufficient to make up its tissue and build up its "glorious form divine."

From our days of boyhood it has been most assiduously taught us that "man was made out of the dust of the earth," and "as of dust thou art so to dust thou shalt return." Now this opinion, if literally true, would necessitate the existence of alumina as one of the elements of organised structure, for no soil or earthy material capable of being employed by agriculturists can be found without alumina existing largely in its constitution, and clay cannot be found without it; therefore chemistry as loudly protests against accepting the Mosaic record in a strictly literal sense as geology, geography, astronomy or any other of the physical sciences so absurdly dogmatised upon weekly from the pulpits, by those who have neglected the study of true science, but still profess to teach us that which is beyond all knowledge.

That man is not made out of the dust of the earth, but from organised material or vegetable matter properly digested and assimilated by other organised beings, chemical science everywhere proves to us incontestably, and the existence of no element in the composition of the human body, which does not also occur in the bodies of the mammalia and all the other classes into which the animal kingdom has been divided by natural historians, tends to prove by the chemical method the truth of that proposition which has been advanced by comparative anatomy:—"That man is one with the beasts of the field;" whilst physiological psychology demonstrates that if man have a reasoning principle independent of its material envelope, and so far spiritual in its character as to be "immaterial" in its principle, so "the beasts which perish" must have mental powers of perception, sensation, thought, feelings, and emotions dependent upon some immaterial principle in like manner, or that we are in fact compelled to admit that thought is one of the many properties with which matter has been invested by the Beneficent Creator and Architect of the Universe.

This spiritual principle of the whole animal kingdom has hitherto eluded the skill of the chemist as it has equally baffled the research of the anatomist; but in the same way that chemical logic will enable the chemist to demonstrate satisfactorily the existence of a material elementary principle, even before its isolation and production in the test-tube, so analogical reasoning proves the possibility and probability of such a spiritual principle as one of Nature's powers; for the same reason that Chemistry has failed to detect and demonstrate the existence of this spiritual principle, whose proper domains are the realms of thought and the sphere of perception, so it has hitherto been unable to render any assistance to the elucidation of the diseases and derangements of the mental powers, dependent as they are upon the combined agency of spirit and matter. The true corporeal structure, so intimately connected with the phenomena of mind may be, and has been, subjected to numerous investigations, by both the anatomist and the chemist, and even further submitted to microscopical analysis and investigation, without as yet giving any satisfactory evidences of change during many of those diseased conditions, which, alas! too often afflict humanity. But wondrous are the discoveries which Chemistry has unfolded to us during the past half century, and who amongst us can foretell what may not be done in the succeeding age? We are as yet only on the dawn of youth of true organic Chemistry, for as a science it has only had its birth some twenty years since; those questions which now appear to us mysterious and profound, will probably, ere long, become clearly explained in proportion as science advances in the path of philosophical investigation. Even now it is scarcely possible for the Professional man, after he has left the schools, to keep pace with the progress of discovery, without he specially devotes himself to that branch of intellectual culture.

The profound speculations of Berzelius, Laurent, Dumas, Liebig, and Hofmann, together with such lesser names of note as Würtz, Kolbi, Stenhouse, Buckland, and Frankland, have created such a mass of materials for mastery and thought, that few minds are capable of the task or equal to the labour.

Without going further into these enticing fields of chemical investigations, than just to allude to the wondrous theory of compound ammonias, by which it has been demonstrated that various compound atoms, such as ethyle, methyle, amyle, and propyle, together with a host of other bodies of like character are capable of taking the place of either one, two, or three, or even four of the elementary atoms of hydrogen from the molecule of ordinary ammonia, and producing such compounds as ethylamine, methylamine, propylamine, amylamine, or di-methylamine, tri-methylamine, tetra methylamine, when more than one atom of hydrogen has been replaced by methyle, all of which are powerfully alkaline bases, similar in properties with the ammonia from whose type they have been derived, by the principle of substitution; and the importance of which discovery is already bearing fruits in the arts of life, by giving most extensive fields of industry in the production of the new purple, mauve, and magenta dyes from aniline obtained in the manufacture of coal gas, and abundantly illustrated in that beautiful substance magenta, which is the nitrate of rosaniline, and already made available to the histologist in demonstrating the various structural elements of which his numerous complex tissues are composed.

The discovery of these volatile compound ammonias will, in a Medical point of view, be eventually productive of new theories of miasmata, and will probably explain the obscure causes of the wonderful propagation of many epidemic and contagious diseases, as try-methylamine has been separated from the urine of man and from the herring, and propylamine has already been discovered to be the cause of that peculiarly disagreeable odour evolved during the decomposition of certain fish, and it has also been discovered in the ergot of rye; and in other organised products of decomposition and disease we might expect to find analogous compounds.

In another direction we might anticipate these theoretical views to expand themselves practically in the building up of the complex molecules of the valuable medicinal alkaloids, quinine, cinchonine, and cinchonidine, now only obtainable by the aid of Pharmaceutical Chemistry from the products of the cinchona barks, and for the supply of which we are still almost wholly dependent upon the primæval forests and unsettled Governments of South America. After almost unheard-of difficulties, and dangers innumerable, it is true we have succeeded in creating extensive nurseries of these glorious trees in our Indian colonies, which, in process of time, will render us in a measure independent of such precarious and failing sources of this veritable "tree of life" and monument of human knowledge. But what a glorious future would burst upon that man, who, by dint of industry, theory, and scientific manipulations, would be able to say, I can produce quinine artificially in any required quantity from substances as comparatively valueless as ammonia, aniline, or methylated spirit.

The bearing of Organic Chemistry on Medicine may be further illustrated by that glorious gift of science to humanity so well known as chloroform, whose wondrous powers of alleviating pain and banishing mortal agony entitles it to the well merited appellation of the "divine essence."

Wine, and its product alcohol, also owe their discovery to the chemical processes of fermentation and distillation, practised from the earliest times, and celebrated in glorious verse as "the gift of gods to man;" but they bear no comparison in their usefulness to the product of its decomposition by chloride of lime; yet who can number the lives which have been saved by the agency of alcohol, timely administered by the hands of attendant Medicine?—whose tongue can celebrate the joys which ruby wine has conferred on the nuptial board or social hour, since Eve first plucked the golden fruit from knowledge's tree, and tempted man to drink thereof? It is probable that cider was first made by Eve.

"'O' εγω πεω τον οινον."

"When wine I quaff, before my eyes
Dreams of poetic glory rise;
And, freshened by the goblet's dews,
My soul invokes the heavenly muse.
When wine I drink, all sorrow's o'er,
I think of doubts and fears no more;
But scatter to the railing wind
Each gloomy phantom of the mind."

MOORE'S *Odes of Anacreon.*

But, on the other hand, who can paint the misery, degradation, and ruin which alcohol has introduced to the world since Adam's fall and Eve's temptation? Who can picture the disease, madness, and woe which its indulgence will yet bring upon sensual humanity? Yet the chemist, by his wondrous enchanter's wand, converts it into ether, chloroform, or aromatic vinegar, to cool the parching thirst, to allay the aching brow, to soothe the troubled spirit, or to rob our Surgical operations of all their horrors, and assuage the piercing pangs of labour.

These transformations are chiefly brought about by the manifestations of those mysterious laws of chemical substitutions and organic molecular transpositions which the changing affinities of various compound molecules exhibit amongst themselves, and the knowledge of which has enabled the chemist to multiply his products of decomposition almost indefinitely; and as it has only of late years been discovered that the now well-known chloroform possessed such marvellous remedial powers, and "such a charmed agency for good," so may we expect that many of those products which as yet possess scarcely more than a purely scientific interest will, as time rolls on, and they have passed from the cabinet of the chemist to the hands of the practical Physician, add to our healing powers, so that we might attain greater and more enlarged mastery over Disease and Death, those mortal enemies of the human race.

It has often served as an illustration of the same law of change that by the act of respiration alone man contributes his quota of carbonic acid to the atmosphere, to be again subservient to the production of vegetation, and return to himself as organised tissue; yet the magnitude of this process of oxidation is scarcely appreciated even by the sanitarian, although its primary importance has been long recognised and admitted by the uninitiated multitude.

An adult human being has been shown, experimentally, to consume daily about fourteen ounces of carbon in the various articles of food obtained from different sources, which is subsequently expelled in equivalent quantities by the excretions of the lungs, kidneys, and skin, while some portion of this material is thrown off as excrementitious by the products expelled from the intestinal canal. Of these 14 ounces of carbonaceous food he returns to the atmosphere as carbonic acid about 25 cubic feet in the same period, weighing about 46½ ounces, and representing about 12·7 ounces of the carbon consumed. In every year of his life he would therefore contribute 290 lbs. weight of solid carbon to the atmosphere, and supposing him to live the full period of seventy years, he would have thrown off by his lungs alone somewhat more than 9 tons weight of solid carbon, equal to 21 tons of sugar, starch, cellulose, or paper. It would therefore require about 4500 individuals to exhale during their lives by respiration a quantity of carbonic acid sufficient to reproduce all the paper manufactured in the United Kingdom during one year, which in 1857 was calculated to amount to 65,478 tons. Or, if we suppose this amount of carbonic acid expended in the reproduction of the woody fibre of the oak, every individual member of this Association would evolve sufficient carbon during his lifetime to regenerate two ordinary-sized oak-trees weighing about five tons.

If every adult human being discharges daily such an immense quantity of carbonic acid as 46½ ounces, or 25 cubic feet, how great must be the daily production of such large and densely populated cities as that we now inhabit, containing as it did 130,000 human beings at the last census? Were there not most effective means provided for its removal, the whole population would soon be destroyed by suffocation in its own poisonous emanations; and for this purpose the atmosphere is continually in a state of agitation and movement by the ascending currents heated by contact with the warmer soil, or thrown into more violent commotion by the winds of heaven blowing from every point of the compass, and carrying with them all that which would oppress and destroy all animal life as well as the whole human race. But these noxious matters are most beneficently distributed over large agricultural districts, and so efficiently mixed up with the whole bulk of the atmosphere that the most experienced chemists have not been able to discover more than from 3·7 to 6·2 parts in 10,000 equal measures of air obtained from different localities. Whilst our beautiful green pastures and ripening fields of corn, our delightful hedge-rows and princely avenues of aristocratic oaks and ancestral elms purify the atmosphere of that carbonic acid of which the plebeian artisan has equally contributed his share to the production alike with the noble and the peer, and all the sacred majesties of the world.

Not only is the atmosphere contaminated by the addition of these large quantities of carbonic acid, but human beings and most animals evolve ammonia in considerable proportion, both from the lungs and skin, and various odoriferous principles which may be readily detected by our senses, and which, when suffered to accumulate in confined localities, as happens in densely populated districts, and in the crowded courts and alleys of all large cities, the noxious effects of these organised products may be everywhere witnessed around us; and were there not some provision made for the removal of this deleterious matter, the atmosphere would ere long become so foul and contaminated with impurity, that virulent epidemics would become generally diffused throughout the civilised world. There is a peculiarly active principle which chemists have recently isolated and identified as an allotropic form of oxygen, but presenting many of the destructive powers of chlorine, and thus of infinite benefit in disinfecting the atmosphere of these contaminations. Oxygen, in its ordinary condition, requires some intermediate agency to bring its peculiar powers into play upon organic matter; there must be constant moisture and an elevated temperature, occasionally even that of a red heat, for the decomposition and perfect combustion of some animalised compounds. But ozone will act instantly, and at the ordinary temperatures, upon most bodies of this description, and all power for harm disappears as if by the enchanter's wand.

In the laboratory the chemist produces this by the aid of phosphorus in a state of slow combustion, or by passing electric sparks through atmospheric air, or obtains a small percentage of the same gaseous, odoriferous agent mixed with ordinary oxygen during the electrolysis of water and separation into its component gases by means of a continuous galvanic current of electricity.

Of these various methods Nature avails herself of the thunderstorm as the grand producing agent of this remarkable body, and when a house has been struck by lightning it is well known that the inmates have often become aware of the presence of some remarkable odoriferous principle, which many compare to sulphurous odours, which effect is due to the ozone evolved, as may be proved by the peculiar decomposition of iodide of potassium in the presence of starch, and the elimination of iodine, and the production of the characteristic blue colour.

Now, during the evaporation of water, which is continually going on over the extensive surfaces of the Atlantic and Pacific Oceans, electricity is evolved to a great extent, and the atmosphere becomes charged with enormous quantities of aqueous vapours, which acquire a highly-electrical condition, opposite in character to that of the surface from which the vapour has been raised. The moistened and heated air, when it has been elevated to the higher strata of the atmosphere, and carried by the revolution of the earth upon its axis and other causes towards the cooler and temperate zones, deposits its moisture in dense cumuli, which become so many highly-excited galvanic batteries, ready at a moment's notice to deluge the earth with moisture, and discharge their electricity in the torrent of the storm, hurling destruction on all sides at those trees, buildings, or other elevated points which do not possess sufficient conductive power to withstand their herculean shocks. The violent electrical tumult of these magnificent storms produces a large quantity of ozone, and purifies the atmosphere of all deleterious agents, destroying the potency of infection by the rapidly oxidising agency of this wondrous oxygen, and washing away all organic refuse too extensive for such a chemical agency to destroy in so short a period.

Now, we also find that the quieter electrical agency of evaporation and condensation of moisture will evolve ozone extensively without the tumult or violence of a storm, and these are the more constant sources of the ozone necessary to our existence. We find ozone predominating very decidedly on all the sea-coasts of our island home, and the annual ozone standards in these districts are always higher than in the interior of the kingdom, where the animal matter predominates and destroys the ozone by using up its powers of oxidation and combination.

Hence we have the explanation of the beneficial agencies of the healthful sea breezes of our coasts, and why our patients become invigorated by such a change of occupation and climate which a sea-side residence occasions. Hence we have the reason why a long voyage generally restores power and energy to the debilitated nabob or cachectic invalid from our Australian or Indian colonies, and why even our nautical brethren as a class enjoy more health than any other equal number of men under different climatal agencies.

The true elements of food are sugar, starch, and oleaginous materials on the one hand, as the carbonaceous substances, and on the other hand as nitrogenous products, the proteine compounds albumen, gluten, fibrin, and other analogous compounds, while the digestive process is carried on by the aid of the decomposition of chloride of sodium, the hydrochloric acid produced being the active agent of the gastric juice, assisting the pepsine, or peculiar albumenoid ferment generated by the gastric follicular glands, the liberated soda going to the bile to produce the biliary soaps consisting of the choleate and choleidate of soda, two conjugated compounds of animal hydrocarbons, and containing but a small proportion of nitrogen. They are sometimes called glycolic acid on the one hand and tauro-cholic acid on the other. These not only serve to neutralise the free hydrochloric acid of the chyme, but help to emulsionise the other oleaginous elements of food, and occasion their absorption by the lacteals, assisted in this operation by the pancreatic juice, which serves as the medium for dissolving these soapy materials.

Chemical experiments readily convert starch into sugar, passing through dextrine. The chief agent in this transformation is that of dilute mineral acids. The recent experiments of Dr. Pavy have demonstrated the existence in the normal liver of large quantities of a substance called by him hepatine, and since shown to be closely analogous to dextrine, if not absolutely identical; consequently, digestion converts starch primarily into dextrine, or hepatine, which is absorbed and laid up in the liver as in a storehouse. Other experiments clearly demonstrate that fatty matters are readily producible from starch or sugar, as witness the fatty fermentation of saccharine matters into butyric, rutylic, and margaric acids; and we have availed ourselves of this fact in agriculture, by giving abundance of starchy materials to those animals we intend to fatten, whilst we reduce the respiratory power and muscular energy by long confinement. It is, however, necessary at the same time to give them albuminous substances, otherwise we rapidly fill their systems with carbonaceous matters, which cannot be got rid of by the pulmonary oxygen. Under these new circumstances, the conversion of starch and albumen into fat evolves considerably more oxygen than can be obtained by respiration, and the liver in producing biliary fats gives up oxygen to compensate for the want of the respiratory powers.

Hence we see the necessity of keeping our gouty patients on a farinaceous diet, for we thus oxidise their excessive nitrogenous blood, and assist in converting the carbonaceous elements of diet into cholic and choleidic acids, urea, and carbonic acid.

For every 4 equivalents of albumen, with 20 equivalents of starch or sugar, will produce 6 equivalents of margarine, 12 of water, and 192 of oxygen; uniting with the elements of albumen to produce 4 equivalents of choleic acid, 8 equivalents of cholic acid, 12 of urea, and 26 atoms of carbonic acid; whilst the addition of 40 atoms of water is requisite, and we must also obtain 32 atoms of oxygen from the air by the function of respiration. Whereas, were no starchy elements employed, the 4 atoms of albumen would require 224 atoms of oxygen (seven times as much) from the air to produce the same products with the exception of the 6 atoms of margarine.

The functions of the stomach and liver therefore are to prepare fat and bile from the amylaceous portions of the food, and, in doing so, to break up the effete and worn out albuminous materials, by adding oxygen through the simultaneous destruction of starch, assisted as these powers are by the oxidation of respiration, and the addition of water.

The ultimate products being, on the one hand, carbonic acid, water, and ammonia, passing off by the lungs and skin, and on the other urea, uric acid, and the other effete products thrown off by the kidneys. In diabetes we get large quantities of glucose eliminated by the kidneys. Under these circumstances the starchy elements of diet produce less bile, less fat, and the necessary stage of hepatine or dextrin has been passed through, and gone beyond the point at which the process should have been arrested.

We will study this process somewhat more in detail, as its importance is very great, and is a problem of vast interest to the Medical Practitioner.

Starch therefore, excluding the gluten, contains, according to chemical analysis, 24 atoms of carbon united to 20 atoms of water, and its formula is usually written $C_{24}H_{20}O_{20}$, during ordinary digestion, having been first rendered gelatinous and soluble by the action of the slightly acid gastric juice, aided by the increased temperature of the stomach, and possibly by the pepsine itself, becomes converted partially into hepatine or dextrin, a substance which may almost be considered an allotropic form of amidin, or gelatinous starch, as it bears so close a relationship to this substance that most chemists give it the same identical formula. However, Dr. Pavy has stated that his hepatine has the formula $C_{24}H_{24}O_{24}$, but it is quite probable that the analysis was made of a hydrate of the pure material; whilst another portion of the starch is converted into glucose by the action of the salivary fluid and pancreatic juice, but the far greater proportion ultimately becomes converted into fat, as we have previously shown, by the joint agency of the liver upon the alimentary starch and effete fibrinous materials, which fatty matters having been thrown out by the liver as bile, in which we find the copulated biliary acids, cholic and choleidic acids, combined with soda, meeting with the acid chyme from the stomach, becomes decomposed, the product being again chloride of sodium, water, and liberated fat. This is subsequently made into an emulsion by the pancreatic juice and absorbed by the lacteals, entering the superior vena cava by the thoracic duct and left subclavian vein, whence it at once goes to the right side of the heart, and thence through the pulmonary circulation.

Dr. Pavy has shown us that cane sugar, when taken into the animal economy, is equally capable of producing dextrin or hepatine, and other observers have also found that animals and man fed on cane sugar in large quantities equally produce fat with those supplied with amidin or starch; and to undergo this preliminary change into dextrin or hepatine it would be requisite for anhydrous cane sugar to assimilate two atoms of water to become dextrin.

During the period of lactation in the female of all the mammalia starch has another duty to perform, and it becomes the source of some of the elements of the natural pabulum of all the junior mammalia, sugar of milk, or lactin, being one of the principal products of its conversion; under these circumstances we have $C_{24}H_{20}O_{20}$ converted into $C_{24}H_{24}O_{24}$ by the assimilation of four atoms of water. Supposing that the change occasioned by the dilute acid of the gastric juice fails to stop at the allotropic stage of dextrin or hepatine, but passes on to that of glucose, we have the formula $C_{24}H_{28}O_{28}$, or the further assimilation of the elements of water to the extent of eight atoms even. Normally, the alkaline bile and the soda in the liver becomes the agents which stop the conversion of the amylaceous matters at the point of allatropism, in consequence of the soda of the bile neutralising the hydrochloric acid of the gastric juice in the lower portion of the duodenum and in the hepatic cells. Hence we see that under some conditions of system soda must be employed as a remedy to hinder the change of starch from passing on into that of glucose; thus we perceive the reason of the conversion of our starchy food into glucose, and why alkalies, opium, and creasote arrest the change at the allatropic condition of hepatine or dextrin, just as in our chemical experiments on starch we arrest the conversion, by means of chalk, as soon as tincture of iodine ceases to give any evidence of unchanged amidin. The theoretical action of our principal remedies for diabetes now developes itself. Whilst, under other circumstances, should there be an excess of the peptic element of the digestive process, we get the starchy elements of our diet changed still further into lactic or acetic acids; for we all know that by the aid of casein in a state of decomposition or decay, we can easily change starch, sugar, or glucose into lactic and acetic acids. This amyloid substance, hepatine, so analogous in its chemical properties to dextrin, has been discovered in the cells of the liver of most animals, as well as of man. It has also been found in the placentæ of the mammalia, and in the cells of the amnion in the ruminantia, but it has also been proved to exist in the tissues of the fœtuses of rabbits, cats, guinea-pigs, sheep, oxen, and pigs; whilst in the skin of the chick in ovo, and at the points where the aggregation of epithelial cells shows the incipient formation of feathers and hairs, it is most abundant. The horny structures contain it plentifully; in the bill, the hoof, and the claws it exists in large proportion. The muscular tissues of the fœtus are full of it,—even from twenty to fifty per cent. can be extracted from the muscles of fœtal calves during the first seven months of their intra-uterine life. During embryonic life, a great part of the fœtal tissues are found to be so impregnated with amyloid substance, that it appears to be the formative material from which these tissues are evolved, and, in fact, it would seem to be related to their growth and development as starch and sugar are to the growth and development of the tissues of all vegetables.

It follows, therefore, from these premises, that this amyloid substance hepatine, or animal dextrin, is not normally converted into sugar in the animal economy. Although so nearly related to the saccharine principle on the one hand, and to starch on the other, it is really a substance intermediate in properties, and necessary to the constitution of the animal frame, being more especially serviceable in the building up of the gelatinous tissues of the skin and muscular structures, and in the earlier stages of the formation of hair, feathers, hoofs, and nails. Whilst, by an abnormal progressive action going on in the degree of conversion of the starchy elements of food, we find that hepatine passes on to glucose, and then gets eliminated from the animal body as so much refuse material—so much lost matter,—fat disappears from the system, and that which has been already formed becomes lost, and there is no longer a production of the adipose substance, of which the chief ingredient is margarine.

We now have that condition which pathologists have called glucosuria, or diabetes mellitus, and in this disease it is by no means unusual to find eight, ten, or even twelve ounces of sugar voided every day by the kidneys, and the urea is increased in a corresponding ratio; so that even 800 or 1000 grains of this substance have been frequently found as the quantity expelled from the unfortunate patient, whilst in that rarer form of disease which has been called diabetes insipidus a substance has been detected in the urine having many of the properties of sugar, but which is destitute of sweetness, yet capable of being converted into grape sugar by the action of dilute acids, and susceptible of fermentation and conversion into alcohol; on the other hand, this will probably eventually be proved to be hepatine or dextrin, as its intermediate characters are so clearly indicative of such relationship to glucose and starch.

Under other diseased conditions of the body in which the liver plays so conspicuous a part, we find the colouring matters of the bile, the fatty acids, hepatine, and taurine escaping from the body through the kidneys; and now we have those phenomena due to one of the forms of jaundice.

Dr. McDonald, in a paper recently published in the *Proceedings of the Royal Society*, says, in reference to this subject that "The recent researches of Lillmann, Pavy, Bernard, Brown-Séquard, and others, tend to prove that the fibrin and much of the albumen of the portal blood vanish in the liver, and that at the same time that it destroys these azotised compounds it forms its non-azotised amyloid substance, and excretes bile containing so little nitrogen that it hardly need be taken into account. Are we not, from the consideration of these functions, led to infer that the nitrogen, which leaves the liver by no other outlet, may go forth in the hepatic blood in union with the amyloid substance thus changed into a new azotised principle; that thus the liver is a great blood-forming organ, in which there is constantly going on a reconstruction of certain ingredients of the blood; that in it the fibrin, etc., which has done its work is disintegrated, the hydrocarbons of the bile abstracted, and the nitrogen combined with the amyloid substance, which, instead of being converted normally into sugar, emerges from the liver a constituent principle of the protoplasm, from the bosom of which (to use the words of Bernard with reference to the fœtal tissues) organic evolution is to be accomplished?"

Now, during the normal conversion of starch into fat as previously shown by the action of the effete, albuminous, or fibrinous materials, a considerable proportion of oxygen must be eliminated from the elements employed, and one portion of the function of the liver may be said to be that of a grand accessory organ to the function of respiration, the products eliminated being highly charged with hydrocarbonous materials, and deficient in nitrogenous matter. Whilst the existence of the amyloid substance as a constituent of the muscular and gelatinous tissues accounts satisfactorily for the presence of hepatine, and the production of glucose even in those diabetic patients who have been deprived of amylaceous food during long intervals of time, in this case they are producing the glucose from destruction of their own tissues, or from those portions of their dietary which also contain the amyloid substance in the normal condition.

During the next generation our duty will be to examine the constitution of the hepatic blood for its nitrogenous elements, and a comparison of its constitution with that of the portal system. We must endeavour to compare the percentages of hepatine, urea, and other constituents in both the afferent and efferent currents of blood.

The function of respiration when efficiently performed has been shown to account for the major portion of the carbonaceous matter consumed in the human organism, but although the supplied carbon has been eliminated to the extent of nearly $\frac{13}{14}$ parts, in the state of carbonic acid from the pulmonary circulation, it is well known that the true formation of the evolved carbonic acid takes place in great measure within the systemic capillaries from the oxidation and destruction of those portions of the corporeal frame which have died in doing their destined work, and henceforth require removal from the body as effete tissue and disorganised material.

The new carbonaceous and nitrogenous elements of the food by the functions of primary and secondary assimilations undergoing those molecular re-arrangements of particles and chemically organic combinations necessary to produce by their modifications either fat, cellular tissue, muscular or nervous fibre or bones, in fact, being employed in replacing those histological elementary tissues which have become exhausted and worn out.

It is not necessary to dilate further upon the manner in which the remaining $\frac{1}{14}$th part of the carbon disappears, the kidneys throwing out some portion as creatine, creatinine, lactic acid, and urea; whilst the skin also contributes to its elimination as various fatty or sebaceous products as well as carbonic and lactic acids. But next to carbonic acid the principal excretion from the animal body is most undoubtedly urea, as it is one of those ultimate products of destruction of tissue which the processes of oxidation going on in the corporeal laboratory has no further power of destroying. It is scarcely necessary to say that when thrown off from the body its permanent character ceases to exist, as decomposition readily ensues either by the aid of heat or from fermentation; and its conversion into carbonate of ammonia rapidly occasions the well-known phenomenon of alkaline urine. In this condition the urea returns to Nature's laboratory the principal part of the nitrogenous matters which have been taken into the organism and formed a portion of the animal frame, the residue of the nitrogen being eliminated from the body as ammonia by both the skin and pulmonary cells, and through the tubular structure of the kidneys as creatine, creatinine, lithic acid, and some other bodies of less importance both in physiological and chemical points of view. Numerous experiments have shown that an adult healthy man, who lives well, discharges, on an average, from 30 to 40 grammes of urea in twenty-four hours. It is therefore within just experimental data to say that every man gets rid of 540 grains of urea daily from his circulating medium by means of his kidneys, or about 28¼ lbs. every year, and during the seventy years of his natural life the enormous quantity of 24 tons of urea, which quantity represents 10·93 tons of nitrogen and 4·8 tons of carbon.

A city, such as Bristol, with 130,000 inhabitants, would produce 1625 tons of urea every year, which, under the present defective method of managing the sewage, is now thrown into the sea, and lost to agriculture. Such a product, if it could be possibly saved and utilised, would represent more than 2112·5 tons of carbonate of ammonia, and 1841 tons of pure ammonia, which would be equivalent in money value to £110,460 sterling annually.

The importance of this elimination has been hitherto much underrated in both pathological and physiological calculations, and it is only of late years, since we have been furnished with Liebig's most excellent method for the quantitative estimation of this ultimate element, that its true import has been fully understood. It is, in fact, the measure of the imperfection of the respiratory function; the vital power and combining agency of the nitrogen alone having obtained the mastery over the destructive power of pure oxidation, and effected a compromise between the two functions, by the discharge of a substance intermediate in character, properties, and composition, yet differing slightly only in arrangement from carbonic acid, water, and ammonia,—the absolute products of true combustion and perfect oxidation. Urea, by assimilating the elements of two atoms of water, becomes converted into two atoms of carbonate of ammonia.

When the quantity of nitrogenous materials consumed is in great excess over that required by the organism, as occurs in the generality of our aldermanic brethren, we find disturbance of the respiratory process, an imperfect oxidation in the eliminated products, and a failure in the phenomena of life, which expresses itself in the elimination of a large quantity of carbon and nitrogen as lithic acid, gravel, or produces the more severely agonising tortures of renal or vesical calculus, or the horrors and pangs of gout, if the lithic acid be produced faster than the powers of elimination can expel it from the system in some one of its soluble forms. Increase the powers of oxidation, and the molecule of lithic acid will disappear from the blood-vessels of our afflicted patients, broken up into urea, or even further decomposed into carbonic acid, water, and ammonia, and now the lungs and skin will assist the kidneys in getting rid of the poison from the system.

Assuming that our patient's powers of oxidation are sufficient to produce the due quantities and proportions of urea and carbonic acid, yet, from the occurrence of some interference existing in the eliminating powers of the numerous epithelial cells of the kidneys, these organs refuse to throw off the urea from the body, this substance necessarily accumulates in the system, producing the disease known as uræmic poisoning, and the nervous system soon shows grave and violent phenomena, as witnessed in the convulsions of epilepsy, of scarlatina, and of the pregnant or parturient female, whilst in other cases the serous membranes come to the relief of humanity and the pavement epithelium cell does the duty of the spheroidal or glandular and serous accumulation, or dropsies occur, containing large quantities of that urea which ought to have been discharged for manure; and should some speedy outlet not be found for this virulent poison, the overcharged system fairly succumbs to the noxious influence, and rapidly increasing drowsiness, thence passing into coma, and closing the scene with an early death—thus proving the virulence of that poison which has been produced in our own bodies by the natural action of physiological laws, but whose elimination has been interfered with, and interrupted by, simple arrest of the normal excretory function.

Assuming the average weight of each individual in this assembly to be 150 lbs., and that the relative weight of the bones to the whole body would be as 10·5 per cent., it follows that the whole skeleton would weigh about 15¾ lbs. Now, dry bones contain on an average 57 per cent. of phosphate of lime, together with some phosphate of magnesia, which proportions would furnish us with about 9 lbs. of actual bone earth or ashes upon incineration and destruction of all organic matter, and exclusively of the carbonate of lime; supposing that we extract the phosphorus from these 9 lbs. of bone earth by the most perfect possible method—we should obtain about 21·3 per cent. of that pure elementary body; consequently, our whole skeleton would give us nearly 2 lbs. of phosphorus for each individual present. I need scarcely say that such a quantity of such a highly combustible material would be nearly or quite sufficient to "set the Thames on fire" if properly used; whilst, if it were converted into lucifer-matches, it would be the means of radiating more light in the world, and thus driving away a deeper Cimmerian darkness than ever any one of the individuals would be capable of doing in a life time devoted to illuminating their species by their philosophical speculations.

The whole of this immense quantity of our inorganic skeleton has been introduced into our bodies slowly and imperceptibly with our food, principally obtained from such of the cerealia directly containing them, or gradually eliminated from the albuminous and fibrinous materials of flesh, which contain it as phosphorus in combination with the so-called proteine substance or its analogues; and which, having already formed part of the organised structure of some herbivorous animal, has also been in like manner obtained from the herbaceous and seminiferous portion of the gramineæ, or such like plants used by them as fodder. If we consider, then, for one moment how large a quantity of bread-stuff this inorganic skeleton represents, we are lost in amazement at the results, and clearly perceive that, should we desire to rapidly introduce phosphates into the system, it would be desirable to employ some material more richly impregnated with phosphorus than either muscular fibre or vegetable gluten. For this purpose eggs would be the best dietetic or indirect source, inasmuch as the dried substance of white of egg contains 13 per cent. of ash, chiefly consisting of phosphate of lime. In addition to the large quantity of phosphorus contained in the bony portion of our skeleton, every individual discharges on an average about 45·5 grains of phosphoric acid per diem in the urine alone, whilst the fæces also contain a very considerable proportion. It is evident therefore that during each year of our lives we eliminate by our kidneys about 2⅓ lbs. of phosphoric acid, equivalent to about 11·2 lbs. of bone earth. Thus, we perceive, each adult throws away more phosphoric acid every year, by his renal organs, than would be sufficient to build up his skeleton anew, and he may be said to have discharged his whole skeleton through his kidneys every year that his life has been prolonged.

Such a calculation strikes one very forcibly that our organisms demand an immense quantity of bone earth supplied to us during our natural lives; for one moment will convince us that a man of seventy years of age would have eliminated a proportion of phosphoric acid by his kidneys equal to about 784 lbs. weight of phosphate of lime, which is exactly 7 cwt. of that material. This quantity would be sufficient, if converted into the soluble superphosphate of lime, or artificial manure, to produce two tons of that material, and would be enough to spread over ten acres of ground, and render it fertile for the reproduction of grain crops to a very large amount.

There has been great controversy during the past twenty years in relation to the existence of fluoride of calcium as a constituent of the bones and teeth of man and animals, but it has at length been conclusively shown that about one per cent. of this material occurs in the substance of dried human bone; consequently, as the skeleton of man is about one-tenth part of his living weight, it follows that there would be about two ounces of fluoride of calcium in the skeleton of a man of the average weight, and I have no hesitation in saying that in the bones of the various individuals in this room there would be sufficient fluoride of calcium to produce enough hydrofluoric acid to dissolve half a hundredweight of glass, or to etch the plates necessary to engrave the whole of the "Pictorial History of England," or to illustrate the most copiously adorned Bible ever published to the world. A collection of 300 individuals would produce about 36·5 lbs. of fluor-spar,—a quantity sufficient to evolve hydrofluoric acid capable of darkening all the windows of the Crystal Palace, and rendering them opaque.

The osseous framework of our bodies is one of equal interest and importance to the chemist, anatomist, and pure Surgeon, and whether taken in a merely practical point of view, or only examined scientifically, it well repays one for the time devoted to its consideration; but at this period it is scarcely necessary for me to allude, except incidentally, to the large percentage of animal matter which bones also contain, on account of which circumstance enormous quantities are annually employed in agriculture, both in a crushed condition, and also even more extensively after having been converted into soluble superphosphate of lime; but when these hard materials of our corporeal framework are submitted to the processes of natural decay, it is astonishing how long they last without crumbling into that dust of which they are said to have been originally made. In fact, the idea of which this dogma is the trite expression probably was practically engendered in the mind of man originally from the ancient method of disposing of the dead by the process of cremation, and from the visible products of those burnt offerings which were the earliest modes of attempting to propitiate offended Deity. Ashes alone remained behind as the record of the past. Although even in the present day we follow the less scientific, and certainly far less healthful mode of sepulture by entombing the remains of fallen humanity, the expression still continues to be commonly made use of, "Ashes to ashes, dust to dust," as a remnant of the former method of consuming our bodily tenement and disposing of mortality. But when these bony portions of our structure are exposed to the whitening agency of the tropical sun, or left unburied upon the sandy plains of the Lybian desert, the toiling caravan may be tracked by its long line of bleaching carcases long after all remembrance of the fact has been buried in oblivion and forgetfulness. The soft flesh, blood, fat, muscles, sinews, nerves, and brain have all disappeared by rotting and decay, and their various organised elements have assumed new forms of combination, and taken on those of the multitudinous volatile bodies and gaseous products of decomposition, in consequence of that slower process of combustion, arising from gradual eremacausis, and the effects of atmospheric oxidation, whilst the naked skeleton alone remains, alike the image and typical resemblance of the destroying angel Death and the personification of Time. Still, much organic matter remains united to the earthy materials of the tissues, from which, by chemical processes, considerable quantities of ammonia may be obtained by manufacturing agency, or by that gradual destruction induced by the conjoint effects of oxidation and moisture. These disorganising processes slowly progress through the original structure of the bone, under the ordinary circumstances of burial, or during the usual exposure in a moistened soil, at a certain rate of destruction in a century; so that the percentage of animal matter gradually decreases in amount, and the phosphate of lime at length remains pure, and deprived of that power of coherence which the gelatinous tissues had originally conferred upon the structure of the bone. Under these circumstances some bones will incur a change of form, and readily give way to the agency of external pressure, and thus we are enabled to account for the misshapen human skulls found on the ancient site of Wroxeter or Uriconium; and when they have been longer exposed to these destructive agencies, we even find them crumbled to decay, and reduced to their primæval state; but as may be expected on ordinary theoretical grounds, the thicker and larger bones of the lower jaw and extremities resist decomposition for much longer periods, and have latterly excited considerable scientific interest, from having been discovered entombed in certain geological formations, whose age may be considered to be as long anterior to the present creation as the date of that form of terrestrial surface which was coeval with the existence of the mammoth, the elephas primogenius, the megatherium, and the cave bears, all of which are animals whose types have disappeared, and been wiped out of existence by the destroying hand of time, aided by those grand geological mutations in the relative levels of land and sea which have ensued during the past hundred thousand years of this world's history. Our ordinary chronological notions, derived from the Egyptian lore, traditionally transmitted down to us by the hands of the ancient Hebrew priest and leader, suffers rudely from the shock of such a sweeping scientific deduction drawn from those durable and immutable pages of the living rock, and we are compelled to look on with wonder and amazement at this lasting monument of human duration in time.

It has been conclusively shown by the researches of Professor Tyndall and other physical philosophers, that the whole of the mechanical powers employed by the united machinery of the world are ultimately derived from the light of the sun, whilst the supremacy of England amongst the nations of the earth mainly depends upon those extensive mines of coal which have been stored up for us in certain beds of the carboniferous series ever since the geological changes which ensued upon the destruction of those ancient magnificent forests which remain to us as evidence of a former fiat of creative energy.

Most extensively employed as they are, thousands of years may elapse ere England feels the want or exhausts her store of mineral wealth. Yet all these she owes to that mysterious agency which light exerts upon vegetative power, and by which the budding plant and growing tree transform carbonic acid, water, and ammonia into the substance of their own cells, juices, and tissues; and, by that law of mutual dependence which Omnipotent wisdom has ordained, rendering the animal subservient to the vegetable kingdom by producing, through the exercise of their functions of respiration and excretion, those mineral compounds which vegetation demands; whilst by that beautiful power of compensation between the respiration and assimilation of the vegetable kingdom, vital energy is restored to the atmosphere by the constant reproduction of "the breath of life," and deposition within the fabric of the exogenous and monocotyledonous tree, or their succulent stems, or wrapped up in the swaddling clothes of its cellular envelopes, "the bounteous gift of Ceres," lays up those stores of starch, sugar, and gum, together with those nitrogenous proteine compounds without which animal life would perish, and this whole creation pass away, like those successive faunas and floras of former geological eras ere man began.

In Nature's laboratory nothing is wasted, nothing lost; as matter was ere time began, atom for atom still remain; not one has disappeared, disintegrated, or been destroyed. Chemical agency and organic transformation, alteration, and substitution account for every atom as originally turned out of the Creator's mould; as one generation succeeds another, so one creation follows the former,—the present formed but from the atoms of the past. In support of this allegation we may adduce the following well-known geological facts, viz., that man is now using, for his extensive manufacturing purposes, coal obtained from four different stages of the Palæozoic period; that mineral is worked in Portugal in the rocks of the Silurian stage; in Spain its richest mines are derived from those of the Devonian period, whilst in Saxony it is worked in the Peruvian formations, and the magnificent coal fields of England are, as we have already adduced, obtained from the Carboniferous era; the latter being the most extensive as well as the most recent of all the four important divisions of the great Palæozoic period of this world's history.

The scientific agriculturalist of the present day extensively uses as a fertilising material phosphate of lime as an artificial manure, in the manufacture of which he has employed coprolites, massive shark's teeth, and gigantic bones, with other organic remains obtained from the red crag of Norwich, a fossiliferous deposit arising from a comparatively modern creation during the Pleiocene era.

These five successive geological eras are the remains of as many different worlds, existing in all their grandeur, sporting in all their beauty, and revelling in loveliness ages before the final appearance of man upon the earth; yet he has long since learnt to employ them all for his especial use and power, and in so doing he fills the atmosphere with carbonic acid, he covers his fields with bone-earth, and his crops return to him with tenfold multiplication, his herds fatten and increase in number, and by consuming them he may be said to rebuild his own body with the atoms derived from the destruction of no less than five former worlds. It is true chemistry nor geology will enable him to isolate or identify the various atoms obtained from each era; but these sciences conclusively prove the laws of transmutation and cyclical change.

It may be thought advisable to say a few words upon the various causes assigned to the production of these incessant changes in corpuscular matter, and the modifying powers which induce these energetic actions in the world around us. Certain physical forces existing above, around, and within the area of our limited faculties, exerting powers of various intensities, and manifesting themselves to our senses in different manners, having been studied under the names of heat, light, electricity, magnetism, together with chemical affinity and motion, are, in fact, the main objects of experimental physics and various affections of that matter which everywhere surrounds us as objective phenomena. They have been hitherto considered, until very recently, as so many distinct causations of all that of which we become cognisant by our senses. But Grove has conclusively shown "that they may all be considered as correlative forces, and to have a reciprocal dependence on each other, that neither, taken abstractedly, can be said to be the essential or the proximate cause of the others, but that either may, as a force, produce the others; thus heat may mediately or immediately produce electricity, electricity may produce heat, and so of the rest, each merging itself as the force it produces becomes developed, and that the same must hold good of other forces, it being an irresistible inference that a force cannot originate otherwise than by generation from some antecedent force or forces." As an illustration of this law we may adduce a most conclusive experiment performed by Grove, and related by him in his work on the "Correlation of Physical Forces," page 58.

By a certain arrangement of a prepared daguerreotype plate, in a darkened box, connected on the one hand by means of wires with a gridiron of silver wire, and on the other with one extremity of a galvanometer coil, and a highly sensitive thermometer, called Briquet's helix, interposed in the circuit; as soon as light is allowed to fall on the iodized silver plate by the removal of the interposed shutter, the needles of the galvanometer are deflected from zero; "thus, light being the initiating force, we get chemical affinity on the plate, electricity circulating through the wires, magnetism in the coils, heat in the helix, and motion in the needles." Of these various forces our earth receives as extraneous motive powers those of light, heat, and actinism,—emanations radiating from our central sun, and which are so many modes of motion of that imponderable ether which exists not only within the interstices of all corpuscular atoms of our immediate material presence, but it also penetrates to the utmost limit of creation, and appears to be coeval with the existence of space itself and the universe it contains.

This imponderable ether has the omnipresence and immaterial properties assigned as the characters of Omnipotence itself; and assuming that one Eternal mind can bring this universal power into action, and develope either the undulations of light, the motions of heat, and the correlative currents of electricity and magnetism, we get chemical affinity necessarily resulting, and motion everywhere follows as a consequent phenomenon, so that these physical forces may be said to be the fingers by which Divinity has acted through the immensity of time and from all eternity. Natural philosophy here merges upon the domains of religion, and both agree in the existence of one universal Spirit, extraneous to, and different from materiality, immense in power, the originator of all power and the creator of all change.

The luminiferous undulations of this universal ether, when submitted to the refractive powers of Newton's prism, elicited the philosophical explanation of the gorgeous rainbow, the harbinger of joy and pledge of Divine forgiveness to man;" and now the more intimate study of the mysterious lines within this wondrous arch of seven primitively refracted rays has enabled the physical philosopher of the present day not only to analyse the constituents of the solar mass and develope the constitution of his planetary worlds, but lately, by the examination of the stellar spectra, we have pushed our analytical inquiries into the immensity of space, and elicited the wondrous intelligence that the universe itself is filled with self-luminous matter, equal in beauty, rivalling in magnificence, excelling in power our own glorious sun—the centre of all happiness on this terrestrial globe—and demonstrating by analogical inductive reasoning the astounding fact that throughout the whole universe of creation one agency exists, one matter extends, and worlds round worlds and suns around suns revolve, whose shape, constitution, and destiny are the same as our own planetary sphere, by which it is evident that the Creator's powers have rivalled in the immensity of space, and that our globe is but as a drop in the ocean of eternity—only a unit in the grand and exhaustless scheme of creation's universe, and that man with his spiritual guide is present everywhere throughout the confines of space, even to the remotest nebula which has been visible in the gigantic telescopes of a Herschel or a Rosse; and however much we might be disposed to tremble at such a development of the theory of the universe, which such sublime discoveries unfold to us, we must ever remember that the Godlike Author of our own pure and spiritualised religion has already declared that "in our Father's house are many mansions, and that He has gone to prepare a place for us," whence "the new heavens and the new earth, which the highest and the purest minds have been inspired to look for, and to prefigure in solemn vision, will infinitely surpass in beauty and in glory all those which have gone before them."

Dr. **Stewart**, in moving a vote of thanks to Dr. Herapath, said: While we should bow to Dr. Herapath's extensive knowledge in his own department, we must claim the liberty of judging for ourselves on matters of the very highest moment which have been alluded to—I may venture to say, in a manner that some here, at all events, perhaps I may venture to say most, think scarcely befitting the sacredness of the subject. After some further observations to the like effect,

Dr. **Evanson** seconded the resolution, and it was adopted.

ACTIONS AGAINST MEDICAL MEN.

Dr. **Radclyffe Hall**, of Torquay, alluding to recent actions which had been brought against members of the Medical Profession, said that those legal prosecutions had been so many legal persecutions. He had a resolution which he wished to propose, and it was "That this Association has observed with extreme pain the legal persecutions to which Dr. Waters, of Chester, Mr. Adams, of London, Dr. Philbrick, of Leamington, all members of the Association, have been so unjustly subjected during the past year. That this Association offers to each of these gentlemen its profoundest sympathy, and tenders to them the expression of its entire conviction that their moral and Professional character and position are unimpeached. This Association also takes the opportunity of deprecating the conduct of any members of the Medical Profession who have rendered assistance in the legal persecutions of their brethren on mere suspicion, or on grounds which have not even the semblance of being substantial.

Dr. **Richardson**, of London, seconded the resolution in an able speech.

Mr. **Nunneley** supported the resolution, and said that throughout the length and breadth of the land the feeling which was embodied in the resolution was entertained. It would not only tend as a solace to those gentlemen who had been so grossly subjected to those proceedings, but prevent the repetition of any such affairs in the future. It was impossible for any member of the Profession to prevent his being placed in a similar position to that of the gentlemen who had been named to them.

The **President** remarked that he rejoiced at that resolution having been brought forward, and felt sure that he should only have to read it and they would pass it with acclamation.

The resolution was adopted with enthusiasm, after which

Dr. **Waters**, of Chester, rose to return thanks for the confidence reposed in himself and the two other Medical gentlemen mentioned in the resolution. He was greeted with prolonged applause. He said he was utterly unprepared for anything of the kind. He was the only one of the three gentlemen embraced by that resolution present now, but he felt it was his duty, as it was his pleasure, to return thanks to the proposer and seconder, and to the Association generally, for the unanimous manner in which the motion had been proposed and passed. He believed that in the annals of Medical jurisprudence no man had had to submit to so baseless and infamous a charge as it had been his lot to contend against. Fortunately for him, his position was such that neither before the trial nor since could he say that he had been in the slightest degree affected by the proceedings, otherwise than by the kind sympathy of many persons with whom he was previously unacquainted. The woman who instigated the charge against him was notorious through Chester for her light and improper conduct, not recently, but for years; and it was further known that the plaintiff had not the means of carrying the trial into court, that she had not paid the expenses of the trial, for she had not the means; but whilst there was a combination of persons who quietly hatched the charge against him in secret, he determined to confute it openly. He must be content with the fact that this was well known, and he was happily able to prove the negative as regarded the fact which the woman alleged against him. He believed they would not for the future have one Medical man coming forward as evidence against another on the merest shadow of suspicion.

Mr. T. **Nunneley** then read a paper on the "Calabar Bean."

Dr. C. B. **Radcliffe** followed with a paper containing practical hints on the treatment of patients suffering from nervous pain and neuralgia.

After an interval for luncheon,

Dr. J. G. **Swayne** read a valuable address in Midwifery. He restricted his remarks to points of practice where they had no very clearly-defined or well-recognised rules. This might be said of the obstetric use of chloroform. The great question, he said, to be settled was whether the use of chloroform in labour should be the general rule or the exception. At present he must say he inclined to the latter view. Dr. Swayne lucidly discussed a large number of other interesting questions.

Mr. **Propert** moved a vote of thanks, speaking of the importance of the paper, and the admirable and eloquent manner in which the writer had brought it forth. He had never admired a paper more in his life, and he thought the Association much indebted to Dr. Swayne.

Dr. **Routh** seconded the motion, remarking that Dr. Swayne had introduced the truth clearly, pleasantly, and convincingly, and he had stood up manfully in favour of British practice.

The motion was unanimously affirmed.

Dr. G. F. **Burder** read an interesting paper, which he illustrated by various diagrams, "On the Climate of Clifton."

Mr. **Erasmus Wilson** read a paper "On the Dermal Pathology of Celsus," and the writers of other papers announced not being present they were not read.

Sir **Charles Hastings** moved a vote of thanks to the President for his conduct in the chair, and the hospitality he had shown. He said this was the close of a very auspicious season, which, among the number that had occurred during the existence of the Society, would, he was sure, stand unrivalled; for its eminent success they were indebted to the indefatigable, zealous, and able conduct of their worthy President.

Mr. **Turner**, in seconding the motion, passed a very high eulogium on Dr. Symonds for his able conduct as President, and for his hospitality.

The vote was carried by acclamation.

Dr. **Symonds** briefly returned thanks, and the company separated.

THE DINNER.

The dinner was held in the evening, in the smaller Victoria-room, and the large company of gentlemen present did it ample justice. Dr. Symonds presided; upon his right was the Mayor, on his left Sir Charles Hastings, while he was further supported by Mr. Cave, the High Sheriff; Mr. Commissioner Hill, the Rev. Canon Guthrie, the Rev. Dr. Bell, and others. In the gallery were several ladies. The Artillery band and a party of glee-singers enlivened the proceedings during the evening. After the cloth was removed, the usual loyal toasts were given, and then "the Army and Navy," coupled with the names of Dr. Goodeve and Mr. Tagan. "The Bishop and Clergy of the Diocese, and Ministers of other Denominations," was responded to by the Rev. Canon Guthrie and the Rev. Dr. Bell. Mr. S. V. Hare, in responding to the toast of "the Mayor of Bristol," alluded to the inestimable blessings conferred upon mankind by the Medical Profession. Mr. Commissioner Hill proposed the health of the High Sheriff, which Mr. Cave having acknowledged, the Chairman gave the toast of the evening, "Prosperity to the British Medical Association," coupled with the name of its founder, Sir Charles Hastings. The toast was honoured with loud applause, and having been acknowledged, Dr. Richardson gave the health of the President of the British Medical Association, which was received with great applause. Dr. Symonds, in responding, said that they should not only pursue the labours of their daily existence, but they should try to lighten the labours of those who came after them. It was no dream that much of the misery of the world could be abolished and extinguished. He alluded to many improvements of the past thirty years in glowing terms, and was frequently applauded. Shortly after the proceedings terminated.

REVIEWS.

Jaundice; its Pathology and Treatment, with the Application of Physiological Chemistry to the Detection and Treatment of Diseases of the Liver and Pancreas. By Geo. Harley, M.D., Professor of Medical Jurisprudence in University College, London, and Assistant-Physician to University College Hospital. Illustrated with Two Coloured Plates. Demy 8vo. Pp. 136. Price 7s. 6d. London: Walton and Maberly. 1863.

The author's main object in this little monograph is stated to be "to point out how valuable an adjunct modern physiology and chemical knowledge is in the diagnosis and treatment of hepatic and pancreatic disease." In doing this he has avoided the consideration of all questions not directly bearing upon the pathology or treatment of jaundice, and limited himself almost entirely to an exposition of his own views. The salient points in these views we will endeavour as briefly as possible to set before our readers.

To diagnose the mere presence of jaundice can hardly be said to require either skill or experience; to ascertain also the disease of which it is the symptom is in some cases easy enough, but in others one of the hardest problems which the Medical man is called upon to solve. "Every now and then," as Dr. Harley observes, "cases are met with, where the patient tells us that the jaundice has gradually come on without any assignable cause, and where, after the most careful examination of his history as well as of his physical condition, we fail to detect a clue to the diagnosis. Cases of this kind are far from uncommon, and this is the more to be regretted, seeing that, unless we have a clear appreciation of the cause, it is not only difficult but dangerous to treat the symptom." —P. 49. We will first of all state Dr. Harley's theory of jaundice, and then show how, by the aid of physiological chemistry, he applies it to the diagnosis of these obscure cases.

Objecting to the recently promulgated views of Frerichs about the mechanism of jaundice, Dr. Harley defends the theory advocated years ago by Dr. Budd, and since then generally accepted in this country, viz., that with whatever disease jaundice may be associated, it is the immediate result of one of two conditions, either (1) mechanical obstruction to the passage of bile into the intestines, and consequent re-absorption of the detained fluid into the blood; or (2) suppression of the biliary secretion, arising from some morbid condition of the liver itself, whereby the biliary ingredients accumulate in the circulation. (P. 7.)

The biliary secretion being in the one case suppressed, in the other reabsorbed, the result to the eye is the same in both, viz., that peculiar staining of the skin which we call jaundice; but the resulting contamination of the blood and alteration of the excretions in the two cases are, according to Dr. Harley, very different. He maintains that there are certain constituents of the bile (the biliary acids) which the liver actually manufactures, certain others (cholesterine and bile-pigment) which exist preformed in the blood, and which the liver merely excretes: that in jaundice from suppression it is only the latter which accumulate in the circulation, whereas in jaundice from obstruction the former as well as the latter accumulate in the circulation, to be from thence eliminated with the excretions. Consequently, in obscure cases, where we cannot decide whether the jaundice arise from suppression or obstruction, chemical examination of the excretions will, he maintains, settle the point. Take the *renal* excretion, for instance. If by chemical tests the biliary acids are found to be present in the urine, the jaundice is thereby shown to be due to obstruction; if the urine contain no biliary acids, merely bile-pigment, then the jaundice must be due to suppression.

The readiest mode by which the biliary acids may be detected, according to Dr. Harley, is the following:—"To a couple of drachms of the suspected urine add a small fragment of loaf sugar, and afterwards pour slowly into the test-tube about a drachm of strong sulphuric acid. This should be done so as not to mix the two liquids. If biliary acids be present, there will be observed at the line of contact of the acid and the urine—after standing for a few minutes—a deep purple hue. On the other hand, the absence of this phenomenon, and the occurrence of merely a *brown* instead of a *purple* tint, although in the earlier stages of jaundice equally indicative of suppression, is of course, for the reasons already given, no indication of the cause of the suppression. That must be gleaned from other circumstances."—P. 61. This test, as the author himself observes, will not hold good in all instances, since many cases of obstruction ultimately merge into cases of suppression, the secreting tissue of the liver becoming gradually disorganised by the pressure of the distended bile ducts. But even here, he says, we have it in our power to distinguish between the two forms of disease, "for whereas in jaundice arising from simple suppression there is cnly an absence of the bile acids, in jaundice from obstruction complicated with suppression the absence of the bile-acids is usually associated with the presence of tyrosine and leucine. For before complete suppression occurs as a result of obstruction, the hepatic tissue has already had its nutrition so impaired as to admit of the formation of those foreign substances. Lastly, the history of the case will of itself be an important guide."—P. 89.

Again, analysis of the *intestinal* excretion will aid us in diagnosing obscure cases of jaundice. Mere inspection of the stools will generally suffice to decide whether or not bile is present. The presence of *fat* in the stools, generally regarded as indicative of disease of the pancreas, *may* be due to disease of the liver. Examination of the nature of the fat will determine which of these organs is at fault. Recent researches have proved that while the liver emulsions and saponifies acid fats only, the pancreas exercises this action upon neutral as well as acid fats.

Dr. Harley draws attention to an important difference, not only in the alteration of the excretions, but also in the contamination of the blood, in the two forms of jaundice which he recognises. His experiments on animals lead him to believe that the biliary acids, and not the biliary pigment, are the really poisonous parts of the bile; and he points out how this result of his experiments harmonises with the clinical fact that "in cases of jaundice from suppression we seldom or never meet with those extreme symptoms of cerebral disturbance which are so common in cases of jaundice from obstruction.—P. 77.

The treatment of jaundice must vary according to the kind of jaundice we have to deal with. In Dr. Harley's words:—"Jaundice from suppression and jaundice from obstruction are, it may be said, two entirely different diseases, with only the symptoms of yellow stain, high-coloured urine, and pipe-clay stools in common," (p. 101), and remedies most appropriate for the former are not merely useless, but positively injurious for the latter. He condemns a routine, hap-hazard use of the so-called cholagogue medicines, and points out the only class of cases in which they are indicated or tolerated, viz., cases of suppression. In some of these cases he has used Benzoïc acid with good effect. Without professing fully to understand its action, he is satisfied that it hastens the re-absorption from the tissues, and elimination from the body, of the bile pigment. In jaundice from obstruction, with permanent occlusion of the duct and great distension of the gall-bladder, he recommends, as a *dernier ressort*, the establishment of an artificial biliary fistula, adhesion of the gall-bladder to the abdominal walls having previously been secured by means of an escharotic. The place of the absent bile in the digestive process he would supply artificially, not, however, in the way usually adopted of giving bile along with the food, but giving it at the end of stomachal digestion, so that it may come in contact with the food at the precise moment its action becomes requisite in the digestive process. He describes an improved method of preparing bile for medicinal purposes, and has had bile capsules made under his own directions by Messrs. Savory and Moore.

If Dr. Harley's views are correct, he has rendered the diagnosis of jaundice far more easy and certain, and so paved the way to its more successful treatment. But notwithstanding the evidence adduced in their support, we must accept them with considerable reserve, until they have been confirmed by a far greater amount of clinical experience than they have yet been subjected to. The point of primary importance to verify is, whether the presence and absence of the biliary acids in the urine are conclusive evidence of obstruction and suppression respectively. To determine this we need a large number of well-marked, well-observed cases in which Dr. Harley's test has been found to hold good. Such scanty clinical evidence as is adduced in the book before us does not go for much. Still, we cordially welcome the book, and most strongly recommend it to the notice of the Profession. The author will have done good service should he merely induce others to enter upon the same path of inquiry; for it is by the light of physiological chemistry alone that farther advance seems likely to be made in our knowledge of diseases of the liver.

PROGRESS OF MEDICAL SCIENCE.

Selections from Foreign Journals.

REMARKABLE CASE OF INSANITY, WITH SUICIDE, OCCURRING IN TWO TWIN-BROTHERS.

By M. BAUME.

Two brothers, Martin and Francis, twins, aged 50, were employed on the Quimper Railway. Martin had, some years back, and recently, exhibited some signs of insanity. On January 15, the sum of 300 francs, the joint property of the brothers, was robbed from a box. In the night of January 23, Francis, who lodged at Quimper, and Martin, who lived with his children two leagues off, both had similar dreams, during which, springing up from their beds to the floor, they rushed and struggled about, exclaiming that they had seized the robber. Martin nearly strangled his son in mistake, and afterwards became more and more violent, and, after attempting to drown himself, was next evening lodged in a lunatic asylum. While this was happening to Martin, Francis became more calm on the morning after the dream, and occupied the day in searching for the robber. By accident he came across the path of the gendarmes who were conducting his brother to the asylum, who was violently resisting them. He immediately became horrified, under the idea that his brother had been mistaken for the thief, and although calming himself afterwards, he escaped the surveillance of his friends, and drowned himself at the very spot where Martin, unknown to Francis, had already tried to do so. Martin died suddenly on the 27th, having continued raving mad from the 24th. At the autopsy about 400 grammes of dark venous blood was found effused between the two layers of the arachnoid over the posterior half of the brain—probably the consequence of the violent attempts made by the patient to dash his head against the walls. "Thus died these twin-brothers, their insanity due to the same cause, appeared at the same time, exhibited nearly the same symptoms, and would have been terminated, unknown to each other, by the same suicidal means and at the same spot, if means had not been taken to prevent it in the case of one of them."—*Annales Medico-Psychol.*, 1863, No. 2.

EXCERPTA MINORA.

Congenital Ranula.—There are only two instances of this affection on record, one published by M. Paul Dubois in 1833, and a second recently communicated to the Toulouse Society by M. Lombard. M. Dubois was called to his case when the child was two days old. It was able to swallow fluids presented by a spoon, but could not suck. The sac, in size and form resembling a large nut, was punctured, and after its glairy contents were discharged, the child sucked for the first time. No reproduction of the fluid took place during the three weeks the child was under observation. The ranula differed from that usually observed, inasmuch that the sac was not attached to the floor of the mouth, but placed in front of the frænum, within the substance of the free anterior portion of the tongue, of which it seemed to form part. M. Lombard saw his case three hours after the infant's birth, a tumour the size of an egg protruding through the lips, the frænum giving it a bilobular form. The tip of the tongue was projected towards the arch of the palate, while its body was parted backwards by the tumour, which was perceptible below the jaw. The child's life being in imminent danger by the obstruction of respiration, the tumour was pierced by a trocar, and a seton introduced in the canula. The fluid was glairy and abundant, but, even after it was all discharged, the membranes of the cyst were sufficiently voluminous to retain the tongue in its abnormal position and prevent sucking. Four days after a portion of the cyst was excised, considerable hæmorrhage resulting. Suppuration was set up, and the cyst gradually diminished in size, the seton being removed on the seventeenth day. By that time the child was able to suck well. Four months afterwards the child was found quite well, the tongue having recovered its natural position.—*Bull. de Thérapeutique*, vol. lxiii., p. 316.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

August 11.

Actions for damages against Medical men seem just now to be acquiring an epidemic character, and two cases which have occurred here are well worthy of record. In the first, the attack has, I am happy to say, proved abortive; the second I hope may do likewise. The former was an action threatened against Mr. Jacob, of Birkenhead, Surgeon to the Birkenhead Hospital and Dispensary, in consequence of his having had the misfortune to break a chain-saw in removing a portion of the tibia from an ununited fracture. One or two links of this unlucky instrument lay hidden in the wound, and made their appearance some considerable time afterwards. The plaintiff, or, more properly speaking, his legal advisers, after putting Mr. Jacob to all the preliminary expense and annoyance of the preparation for the defence of the case at the next Chester assizes, withdrew it on the very last day on which it was possible to do so.

The latter case is a more serious one, and the plaintiff claims large damages for an injury received in an attempt to reduce an old-standing dislocation. The case was as follows: A man, aged 35, was admitted into the Northern Hospital as a patient of Mr. Hakes' on account of a dislocation of the left hip, of four or five months' standing. The patient was put under the influence of chloroform, and the limb extended by means of pulleys. The limb appeared to have been sufficiently lengthened, and a rotatory movement of it was made, when a loud snap told only too plainly that the femur had given way,—a fracture had occurred just below the trochanters. The limb was put up in the ordinary way, and progressed favourably, the patient having now shortening of the leg to the extent of only about an inch,—no more than is fairly ascribable to the dislocation. He is able to walk well, and has sufficient use of the limb to enable him to climb on to the top of an omnibus. I believe that the patient's employer kindly paid his wages for the whole time he was laid up, and he was, of course, under no expense at the Hospital, so that it is difficult to see what pecuniary loss he has sustained; and, since his leg is just as good as before, it is equally difficult to see what claim he can have for any personal damage. However, injuries as well as diseases, may be "turned to commodities," and this town is assuredly not free from that predatory genus who, as the old song says, "grapple all that they get hold." It was not long before the legal value of this precious limb was recognised. Many Liverpool Surgeons were canvassed for their opinions about it, and I am happy to say that not one was found (so far as I can learn) to further the purposes of the prosecution. More lately, however, the plaintiff's advisers have been trying their luck in London, and it will be both curious and interesting to see whom they will induce to follow the lead of that distinguished trio who figured in the witness-box at Chester.

One most important question that this trial will raise is, as to the legal liability of Hospital Surgeons for the non-success of operations; and should the glorious uncertainty of the law hold Mr. Hakes and his colleagues responsible for this failure, then let all other Hospital Surgeons be warned thereby; for so long as there exist attorneys actuated by that same noble disinterestedness which filled the souls of Messrs. Dodson and Fogg, and led them to undertake the far-famed case of Bardell *v.* Pickwick, on the condition that they would charge the plaintiff nothing unless they gained their cause, so long will it be possible for any spiteful patient whose case has not ended in complete success to engage the Surgeon who has treated him in a game of legal pitch and toss, in which the conditions of the plaintiff's side are, "Heads, I win; tails, you lose."

The question might be raised also whether the Surgeons themselves are liable, or the Committee who appointed them. I apprehend, however, that in this case, admitting the legal responsibility of the Surgeons for what they did, there will be no difficulty in proving that there was on their part neither ignorance nor negligence, and that the only fault lay in the femur of the patient, which was not so strong as it ought to have been.

Dr. Trench, Dr. Duncan's successor in the post of Medical Officer of Health, has had already a somewhat novel and important question to decide,—viz., whether the smell of petroleum is or is not unhealthy. He has, very much to the disappointment of many, reported that there is no proof that it is so. I think, however much we may detest the odour of this article, that all who are guided simply by the evidence of the case as it is here, must come to the same conclusion as Dr. Trench. I suppose that all your readers know the purified rock oil, but I hope, for the sake of humanity, there are some still ignorant of the stench of the unpurified material as it is stored here. For the benefit of such, I may say, that had the discovery of this article occurred in the reign of that old Roman Emperor who is said to have offered, I forget how much, as a reward to anyone who could obtain for him a new sensation, its discoverer might rightfully have claimed it, though I must say I think it highly probable that His Imperial Majesty might have paid the reward first to save his credit, and cut off the discoverer's head afterwards to relieve his feelings; for of all the new sensations that affect the olfactory nerves, I question whether any can exceed in "beastliness" the stink of this mineral. I use the term "beastly" in its scientific sense, since there is one beast whose specific odour is exactly represented by the smell of petroleum; for everyone unacquainted with the real origin of the smell thinks directly he perceives it that Tom-cats have been perfuming the place. A friend of mine, for example, had been some time in a petroleum store, and went straight from thence to buy a carpet. The upholsterer unrolled a bran new one, with that air of mingled pride and affection with which a seller always regards an article "which he can confidently recommend;" but he sniffed the air, looked regretfully at the carpet, and said, "Ah, Sir, aint it a shame? beautiful new carpet you see, Sir; them nasty cats, do what we will, we can't keep 'em off." "Perhaps it is my coat," said my friend, and a single whiff of the odour from his sleeve absolved the Tom-cats from the imputation of having odorised that carpet at any rate. It seems that it is all but impossible to prevent a good deal of leakage from the casks, and the men who work in the petroleum stores find them, when first opened in the morning, filled with a blue vapour, which produces a stupefying effect, but, just like the vapour of chloroform, produces no more effect when largely diluted with air than does the scent of chloroform which pervades an operating theatre.

Dr. Trench very thoroughly investigated the sanitary condition of the houses close to the stores complained of, and found the health of the people fully up to the average; while, with regard to fever, so far from there being any cause to accuse this stench of producing it or favouring its development, it seems that where there has been most petroleum there has been least fever.

I saw, a short time since, a case of suicidal strangulation, the post-mortem appearances of which were very marked. The man was found, about seven hours after he had been left, dead, cold, and rigid. The arms were bent, the hands raised a little above the breast. Round the neck, just below the cricoid cartilage, was a strip of his shirt, tied at the back of the neck. The face was a dark red, dotted with spots of deeper red. There was ecchymosis under the conjunctivæ. There had been some bleeding from the nose, and the tracks in which the bloody froth had travelled showed that the face had first been turned to the right side, and that the head must then have been thrown so violently back that the fluid ran over the forehead, and that at last the head turned to the left. He must, at the same time, have moved slightly from left to right with his whole body.

There was a good deal of congestion of the brain, and much fluid effused; no apoplexy. There was slight effusion of blood under the mark of the ligature. The heart was absolutely empty; the lungs deep in colour; but it was doubtful whether there was anything more than a post-mortem cause for this.

Those of your readers who are interested in questions relating to arrested development, hermaphroditism, etc., might obtain some useful hints from a case now under the care of Dr. Gee, in the Workhouse Hospital. It is that of a person about 25 years of age, in whom the male and female developments are remarkably blended. He must be considered a male, since there is a penis, scrotum, and testes; but these have not gained a size exceeding that of a well-grown child of four years old. The rest of the frame is modelled almost completely on the female type. The face is destitute of hair; the limbs have a thoroughly feminine rotundity of outline. The breasts are developed quite as much as in many women of his age. There is, however, a noticeable difference in the two nipples and the areolæ around them, the right having very much the appearance of the male, the left completely that of the female. The voice is rather more like that of a female than a male; but it has not that peculiar high pitch that is often met with in men in whom the usual "breaking of the voice" which occurs at the time of puberty has not happened.

In this case the arrest of development in the generative organs seems to have determined the development of many of the characteristics found in castrated animals, and I suppose that the extraordinary growth of the mammary glands must be ascribed to the same cause.

MEDICAL NEWS.

Royal Colleges of Physicians and Surgeons, Edinburgh.—Double Qualification.—The following gentlemen have passed their First Professional Examinations during the recent sittings of the Examiners:—

Henry Glover, Co. Down; Francis B. W. White, Perth; Thomas Currie, Elie, Fife; Thomas Mein Austin, Edinburgh; William D. Cosgrove, Aberdeen; H. R. Smith, Berwick-on-Tweed; Arthur W. Shedden, Madras; Thomas Bennett Kehoe, Cork; Henry William Newton, Newcastle-on-Tyne; Edward Connellan, Cork.

And the following gentlemen have passed their Final Examinations, and been admitted L.R.C.P. Edin. and L.R.C.S. Edin.:—

David James Simpson, Edinburgh; John Liddle Crombie, Scone; Henry Robinson, Derbyshire; David Smith, Montrose; William Hepburn M'Lean, Portsoy; George John Pattison, Ross-shire; William Pringle Dickson, Bengal; John Vicary Thatcher Malcolm, Edinburgh: Wm. Goldie Stevens, Lanarkshire; Paul Moffatt, Northumberland; George Dickson, Edinburgh; Patrick Kane Kiernan, Leitrim; John Dunlop, Lanarkshire.

Royal College of Surgeons, Edinburgh.—The following gentlemen have passed their First Professional Examinations during the recent sittings of the Examiners:—

Thomas Higgins, Co. Derry; Samuel M'Crea, Belfast; Andrew James Duncan, India; John Pirie, Co. Tyrone; Robert Watson, Dunfermline; Wm. S. Irvine, Londonderry; John Chiene, Edinburgh; Adam Orr, Clonmel; Lockhart Elder, Edinburgh; John A. M'Dougall, Galashiels; Wm. W. Purves, Edinburgh; William Walker, Grangemouth; Jas. Taylor, Antrim; Andrew Cochran, Strathaven; John Macfee, Buteshire; George Aitken, Rutherglen; John Orr, Glasgow; John L. Mackay, Thurso; Joseph M'Loskey, Londonderry; John Robson, Perthshire; James Elliot, Yorkshire; David Arno Smet Thorburn, Dumfries; James Robertson, Aberdeenshire; William Dobie, Langholm; T. J. Fordyce Messer, Portobello; Albert J. Dotte Pullar, Edinburgh; Thomas Morris, Kilrenny; John B. Barbour, Kirknewton.

And the following gentlemen have passed their Final Examinations, and obtained the Diploma of Licentiate of the College:—

Lewis Cameron, Morayshire; R. Bannatyne Finlay, Newhaven; David Tucker, Belfast; Joseph Metcalfe Nicholson, Leeds; John Pringle, Edinburgh; John Robertson, Blair Athole; James Rhind, Stockport; Alex. Goodall, Fifeshire; Niel Gray Mercer, Argyllshire; John Craw, Earlston; George Rankine White, New York; Matthew Charteris, Dumfriesshire; James Wilson, Edinburgh; Alex. Kinnear Morson, Newcastle-on-Tyne; John Tait Mackay, Caithness; William Cumming, Inverness; Samuel Fleming, Co. Londonderry; Eugene Robt. O'Brien, Co. Tipperary; Adam Boyd Simpson, Co. Tyrone; James Watson, Edinburgh; John Wm. Maxham, Quebec; Archibald Dickson, Edinburgh.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, August 6, 1863:—

William Bird, Tarporley, Cheshire; Charles Robert Larkin, Bishops Castle, Salop; Charles Edward Prince, Balsham, Cambs.; Joseph Groves, King's College; William Durrant, Manchester-street, Argyle-square; John James Jones, Queen's-road, Peckham.

The following gentlemen also on the same day passed their First Examination:—

Francis Graham Bennett, St. Bartholomew's Hospital; Frederick John Hawthorn, London Hospital; Arthur Taylor, Guy's Hospital; Thomas Edwd. Blick, St. Mary's Hospital; David Chas. Lloyd Owen, Sydenham College, Birmingham.

University Intelligence.—University of London.—The following are lists of candidates who passed the respective Examinations indicated:—

First B.Sc. Examination, 1863.

Entire.

First Division.—Edward Atkins, private study; William Donald Killick, London Hospital; Andrew McDowall, Highbury Training College; John

Robertson, private study; Edward Robinson, Owen's College, Manchester; William Stockton, Chester College.

Second Division.—Fred. Kent Clarke, M.A. Camb., Clare College, Cambridge; Alfred Cooper, Cheltenham College; William Parker Irving, New College; Henry Ward Kearns, Kennington College; Arthur McDougall, Owen's College, Manchester; Thomas Alexander Pooley, private study; Richard Bissell Prosser, private study; William Shawcross, private study; J. C. F. Louis Sprengell, Ph.D., Göttingen; Charles Josiah Woodward, Midland Institute.

Excluding Mathematics.

First Division.—Alex. Morrison Thomson, B.A., private study.

Second Division.—Wm. Chatterton Coupland, B.A., School of Mines and University College.

BACHELOR OF MEDICINE.—PRELIMINARY SCIENTIFIC EXAMINATION, 1863.

Entire.

First Division.—Arthur Bayley Adams, London Hospital; John Augustus Ball, Guy's Hospital; James Campbell Brown, University of Aberdeen; Francis John Buckell, University College; Stephen Wootton Bushell, Guy's Hospital; William Turner Thiselton Dyer, King's College; Benjamin Chastor Gowing, Guy's Hospital; Rowland Heathcote, Royal Manchester; Samuel James Hulme, Royal Manchester; Charles Kelly, King's College: Arthur McDougall, Owen's College; Augustus Constable Maybury, St. Thomas's Hospital; Thomas Alexander Pooley, private study; George Arthur Rogers, London Hospital; Charles James Hardy Smith, University College; George Owthwaite Spencer, University College; John Davis Thomas, University College; John Maude Whitwell, University College.

Second Division.—Charles Taylor Aveling, St. Thomas's Hospital; Howard Barrett, St. George's Hospital; Francis Bateman, St. Bartholomew's Hospital; Henry Hargreaves Birtwell, St. Thomas's Hospital; Paris Bradshawe, King's College; Thomas Alpheus Buck, private study; Richard Carter, Charing-cross Hospital; Thomas Cole, St. Bartholomew's Hospital; Reginald Eager, Guy's Hospital; Charles Frederick Lethbridge, University College; George Sherwin Madeley, Royal Manchester; Thomas Charles Murphy, University College; George Vivian Poore, University College; Richard Careless Sanders, private study; James Sawyer, Queen's College, Birmingham; John Ablewhite Smith, Middlesex Hospital; Robert Shingleton Smith, King's College; Alexander McIvor Tindall, St. Bartholomew's Hospital; John Burges Welch, King's College.

Chemistry and Botany only.

First Division.—Other Windsor Berry, Charing-cross Hospital; James Stanton Cluff, B.A. Dub., University College; Thomas Marsden Edwards, Andersonian Institution; Augustin Barber Fry, Guy's Hospital; Ralph Gooding, B.A., King's College; Boydell Graves, University College; John Grimes, King's College; Henry Greenway Howse, Guy's Hospital; John Pearson Hughes, University College; John Waller Melson, Queen's College, Birmingham; George Hunt Orton, St. Bartholomew's Hospital; David Charles Lloyd Owen, Sydenham College, Birmingham; John Stuckey, University College; Henry Summerhayes, B.A., St. Thomas's Hospital; William Warwick Wagstaffe, B.A., St. Thomas's Hospital.

Second Division.—Joseph Lees, St. Thomas's Hospital; Fenwick Metcalfe, King's College; William Alexander Provis, King's College; Samuel Hignett Smith, King's College.

FIRST M.B. EXAMINATION, 1863.

Entire.

First Division.—Bryan Holme Allen, University College; Peter Maury Deas, University and Surgeons' Hall, Edinburgh; Olliver Thomas Duke, Guy's Hospital; Thomas Henry Green, University College; Philip Brookes Mason, University College; Revett Coleridge Powles, King's College; Frederick William Richards, St. Bartholomew's Hospital; George Henry Savage, Guy's Hospital; Charles Smith, Guy's Hospital; William Vicary Snow, University College; Francis Thomas Tayler, Guy's Hospital.

Second Division.—Joseph Birt, Sydenham College, Birmingham; Thomas Bond, King's College; Thomas Marsden Edwards, Andersonian Institution, Glasgow; Charles Augustus Greaves, St. Thomas's Hospital; William George Vawdrey Lush, St. Bartholomew's Hospital; Edward Mackey, Queen's College, Birmingham; Thomas Murray, St. George's Hospital; Richard Douglas Powell, University College; Charles Edward Squarey, University College; Henry Trimen, King's College.

Excluding Physiology.

First Division.—Henry Charles Hilliard, Guy's Hospital; Ebenezer Fulham Turner, Guy's Hospital.

Second Division.—Thomas Robinson Glynn, St. Bartholomew's Hospital; Walter Anstice Harvey, St. Bartholomew's Hospital; Arthur Trehern Norton, St. Mary's Hospital; Charles Read, University College.

Physiology only.

First Division.—Palemon Best, University College; Arthur Wellesley Edis, Westminster Hospital; John Jones Phillips, Guy's Hospital; Walter Rivington, B.A., London Hospital; Frederick Thomas Roberts, B.Sc., University College; William John Smith, University College; John Kent Spender, King's College.

Second Division.—James Beddard, Guy's Hospital; John Cooke, University College; Athenodore De Negri, University College; Henry Stanley Gale, King's College; William Vosper Jakins, University College; Henry Thomas Lanchester, St. Bartholomew's Hospital; John Langton, St. Bartholomew's Hospital; Richard May Miller, University College; Frederick Simms, King's College.

UNIVERSITY OF ABERDEEN.—At the late Graduation Term the following candidates, after the usual Examinations, received Degrees in Medicine and Surgery:—*Degree of M.D.*—Alexander Silver, A.M., Marykirk, honourably distinguished; Thomas Redfern, Chesterfield; Thomas Rowell, Aberdeen; Thomas Black Webster, Oldmeldrum. At the same time, David Arthur Leslie, A.M., M.B., Aberdeen, was promoted to the Degree of M.D. *Degree of M.B.*—Charles Alexander, Aberdeen; Peter Burgess, A.M., Inveravon; John Strachan M'Robbie, Aberdeen; John Reid, Glenmuick; John Clement Souter, Aberdeen; William Sutherland, A.M., Aberdeen; Thomas Greville Thursfield, Broseley, Salop. *Degree of M.C.*—Peter Burgess, honourably distinguished; Charles Alexander, John Strachan M'Robbie, Thomas Redfern, John Reid, Thomas Rowell, Alexander Silver, John Clement Souter, Thomas Greville Thursfield, and Thomas Black Webster. At the same time the following were declared to have passed part of their Examinations:—George MacIver Campbell, William Center, Stewartson Clark, James Copland, John Forbes Cottingham, James Davidson, Robert Alexander Farquharson, James Thomas Gage, Alexander Gibb Grant, Ebenezer Erskine Harper, James Foote Henderson, Alexander Johnston, John Knox, John Livingston, George Maconachie, Godfrey Alexr. Macrae, Alexander Edward Macrae, Patrick Manson, Josiah Wright Matthews, John Murray, Edwin Burrell Muskett, William Paterson, William Robertson, John Simpson, Andrew Skeen, William Stewart Smythe, William Henry Stewart, George Thomson, Thomas Watt, Alfred Harold Wheldon, William Leavens White, and John Kenneth Wilson.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BELL, OSWALD HOME, M.D. Edin., has been appointed Professor of Medicine in the University of St. Andrews.

PHILLIPS, CHARLES HENRY, F.R.C.S. Eng., Surgeon to her Majesty's Household, at 6, Trafalgar-square, Brompton, S.W., on August 8, aged 76.

SHEPPEE, FRANCIS, of Bedford, at Lee, Kent, formerly Physician-General H.E.I.C.S., Bombay, on August 8, aged 70.

SKINNER, THOMAS, M.D. St. And., has been elected Physician to the Orphan Girls' Asylum, Liverpool.

STRUTHERS, JOHN, M.D. Edin., has been appointed Professor of Anatomy in the University of Aberdeen.

THOMSON, DAVID PURDIE, M.D. Edin., has been appointed Justice of the Peace and *ex officio* Coroner for the Colony of British Guiana.

WHITE, EDWARD, L.S.A., at Lamb's Conduit-street, London, W.C., on August 9, aged 74.

DEATHS.

AYTON, GEORGE, M.R.C.S. Eng., at Kenilworth, Warwickshire, on August 8, aged 41.

CANTON, WILLIAM LAURENCE, Dentist, late of the H.E.I C.S., at Coburg-place, Old Kent-road, aged 79.

HOLM, JOSEPH WHITE, M.R.C.S. Eng., at Brighton, on August 6, late of Hampstead.

HUGHES, THOMAS HENRY, M.D., at Chester, on August 8, aged 25, House-Surgeon to Chester Infirmary.

MOORE, WILLIAM, M.D., T.C.D., has been elected Physician in Ordinary to Sir P. Dun's Hospital, Dublin.

UNIVERSITY OF LONDON.—We are requested to announce to candidates for the ensuing Second M.B. Examination that the Examination for Honours in Surgery will this year be carried on as heretofore,—the Pass Examination alone being modified by the omission of the Practical Examination in Surgery.

LONDON HOSPITAL.—On Tuesday, July 14, the House Committee of the London Hospital presented the gold medals for proficiency in Medicine and Surgery respectively to Mr. Nathaniel Hickford, of Forest Gate, Essex; and Mr. Herbert Spencer, of Ackworth, Yorkshire.

POISONING BY ARSENIC.—NORTH WALES CIRCUIT.—CHESTER, AUGUST 6.—Alice Hewitt was arraigned upon an indictment charging her with the wilful murder of her mother at Stockport on the 26th of March last. The prisoner in February last made a proposal to an insurance company at Stockport to insure her mother's life, and, her mother being at the time in a weakly state of health, the prisoner induced another woman to go before the doctor and represent the mother, and an insurance was effected on the 6th of March. Shortly after the prisoner on two occasions purchased arsenic, the mother became worse, suffering from incessant vomiting, and died on the 26th of March. The fraud on the insurance office in passing off the woman to the doctor was discovered, and the prisoner committed for trial for obtaining money by false pretences. Pending the trial, the body of the mother was exhumed, and the result of a post-mortem examination showed 155 grains of arsenic in the body. The trial was postponed to the next assizes, on the ground that the prisoner was in an advanced stage of pregnancy, and the excitement and anxiety of the trial might bring on a premature confinement.

Royal Recognition of Professional Services.—Campbeltown.—When Prince Alfred was attacked by fever at Malta in the spring, his Royal Highness was attended by Mr. Kelly, R.N., assistant to the Inspector-General of Hospitals, and son of the late incumbent of this parish. On the recovery of the Prince, his photograph, in the uniform of a Lieutenant in the Royal Navy, was taken by Mr. Mayall, and sent by command of her Majesty to Mr. Kelly's relatives in Kintyre. The photograph, a beautiful work of art, lately arrived in Campbeltown, accompanied by a letter from Colonel Phipps, expressing regret at the delay which had occurred before it could be sent. The portrait is the subject of general admiration in the town, and has been compared by some judges to the likeness of the "Young Chevalier;" and it is not a little singular that Mr. Kelly's great-great-grandfather lost his life at Culloden, fighting against the Royal House which has now been pleased to honour his descendant.—*Glasgow Daily Herald.*

Knighthood of Dr. James Coxe.—We are happy to see that an honour, which, of late years, has been but rarely bestowed on members of our Profession, has been awarded to Dr. Coxe, the active and able member of the Scottish General Board of Commissioners in Lunacy. The *Times* of the 8th publishes the following paragraph:—"Six years ago the report of the Royal Commission of Inquiry into the state of Lunacy in Scotland startled the whole country by the revelations contained in its able and elaborate report. As a matter of course that report was assailed, especially in Scotland, but the experience of the General Board of Lunacy has since amply confirmed the full truth of its statements. We are glad to see that the Government, by recommending Dr. James Coxe to Her Majesty for the honour of knighthood, have now recognised the services of the Royal Commission. Dr. Coxe was associated in the Scottish Commission with the late Sheriff Monteith and two of the English Lunacy Commissioners, Mr. Campbell and Mr. Gaskell, but the other avocations of these gentlemen prevented their giving their full time and attention to its duties, and in Scotland Dr. Coxe was looked upon as chiefly responsible for its statements." The official notice of Sir James Coxe's dignity of knight of the United Kingdom of Great Britain and Ireland was published in the *London Gazette* of the 11th inst.

Removal of Greater Part of the Clavicle for Osteoid Cancer.—At St. Bartholomew's Hospital, on Thursday last, Mr. Skey removed the greater part of the clavicle for malignant disease. The patient was a man of good general health, and only 30 years of age. The disease began about three years ago, when he first noticed a small lump, which was not tender nor painful. It increased slowly, and caused so little inconvenience that he kept at his duty as a soldier for eighteen months longer. Indeed, he had been able to use the arm ever since, but after using it for a time he had pain, and the arm felt weak. There was no inequality in the pulses, and apparently the disease was quite limited to the bone. The patient being under the influence of chloroform, Mr. Skey made an incision over the bone, and fully exposed the inner two-thirds. He then divided it by bone forceps about an inch from the acromial end, and afterwards disarticulated it at the sternal end. The operation was skilfully performed, and no vessel required ligature. For the above particulars we are indebted to Mr. Ludlow, Mr. Skey's House-Surgeon. We shall make a further report on this rare and interesting case next week. The removed bone was sawn in two, and from its general appearance, and from microscopical examination it was considered to be osteoid cancer.

The Islington Child Murder.—The Treasury have abandoned the charge of murder against the prisoner Clarke. The coroner's jury have also returned a verdict to the effect "that Elizabeth Hunter came by her death by violent means, the nature of which there was no evidence to show; and, further, that the said Elizabeth Hunter was maliciously murdered by some person or persons unknown."

St. Thomas's Hospital.—At the weekly meeting of the Metropolitan Board of Works, on August 7, the report of the Thames Embankment Committee was brought up. It stated that Mr. Baggallay, the treasurer of St. Thomas's Hospital, proposed to form a suitable site for the new Hospital on the ground of the southern embankment, nearly opposite the Houses of Parliament. The committee had entered into an agreement with the authorities of St. Thomas's Hospital, subject to the approval of the Board. The terms were that the land required, amounting to about eight and a-half acres, should be sold to the Hospital for the sum of £95,000, the Board of Works to make the embankment and level the ground by December 31, 1865. After a long discussion the report was adopted, and the chairman was authorised to communicate to Mr. Baggallay that his offer was accepted.

Utilisation of the Metropolitan Sewage.—A report lately presented to the Metropolitan Board of Works states that there are nine answers received to the advertisements which have been issued in reference to the employment of the sewage, but that they none of them comply with the terms of the advertisement, and that only six make any proposals of the nature of a tender. The names of the parties who have replied to the advertisements are as follows:—Dr. Thudichum, 2, Pembroke-road, Kensington; Mr. David Curwood, 18, Upper Grosvenor-street; Lord Torrington, Sir Charles Fox, and Mr. Hunt, 8, New-street, Spring-gardens; Mr. John James Moore, 6, Pump-court, Temple; Mr. George Townsend, Secretary to the London Sewage Utilisation Company (Limited), 18, New-street, Spring-gardens; Mr. George Shepherd; Mr. C. F. Kirkman, 6, Duke-street, Adelphi; Mr. Thomas Ellis, 76, Warwick-square, Belgravia; the Hon. W. Napier; and Mr. Hope. The report, the tenders, and all supplementary papers and explanations of the tenders are to be printed for sale.

Discovery of a Bone Cavern in Argyllshire.—A cavern, similar to those found in England and on the Continent, containing osseous remains of men and of lower animals, has lately been discovered on the property of John Malcolm, Esq., of Poltalloch. By the liberality of that gentleman, the cavern has been fully explored, and its contents carefully collected by the Rev. Messrs. Mapleton and Macbride. These contents consist of the remains of men, of other animals, and shells of edible shellfish. The only article of manufacture found in it was a small celt, a flint flake; and the only domestic utensil was a scallop shell, or *pecten maximus*—the shell used by the ancient Celts as a drinking vessel. The cavern was evidently used as a place of residence, for beneath the cave stuff, or *débris*, were found ashes, bits of charred wood, and bones, a flint pebble for striking fire, and stones, which, from their form and position, seem to have served for seats. When first discovered, the human remains were supposed to have been those of persons who had fled there for shelter, when the adjacent country was laid waste by fire and sword during the ruthless raid of Alister MacColl Citto. The absence, however, of metal weapons and culinary vessels—both which were of universal use in the days of this scourge of Argyllshire, and which, undoubtedly, would have been conveyed by the refugees to their place of concealment—and the presence of celts and scallop shells, seem to disprove this opinion, and to point to a much higher antiquity for its inhabitants. What seems to confirm this opinion is the fact that many of the bones, teeth, and shells were as firmly embedded in a calcareous matrix as are the fossil remains in the seas and carboniferous limestones. Mr. Macbride is engaged in examining the contents, and preparing a report on the subject, which, it is to be hoped, will throw additional light on the history of this interesting cavern and of its ancient occupants.—*Glasgow Paper.*

Vivisection.—The following letter from Mr. Nunn, of the Middlesex Hospital, appeared in the *Times* of Wednesday, in answer to some absurd inuendoes contained in a letter from the Secretary to the Society for the Prevention of Cruelty to Animals. The Secretary hinted, although he did not state, that in England the spinal nerves of dogs are daily laid bare for the purpose of demonstrating their functions, and that English Medical students are constantly in the habit of decoying cats and dogs to their lodgings in order to enjoy the fiendish gratification of torturing them:—"Sir,—I trust you will give one who has had twenty years' experience of Medical students space to make the most emphatic protest against the insinuation contained in the letter of the Secretary of the Society for the Prevention of Cruelty to Animals, to the effect that Medical students are specially chargeable with cruelty to animals,—cruelties alleged to be perpetrated under the cloak of physiological enthusiasm. Nature does not reveal her mysterious workings to prentice hands. To obtain a result from a vivisectional experiment, great knowledge of physiology, extreme delicacy of hand, and unwearying patience are required. I am quite certain that there is no lecturer in the United Kingdom who would exhibit or repeat any physiological experiment involving the vivisection of the lowest animal without due consideration. The character of the lecturers needs no defence from me. As for the Medical students, I will undertake to say that were it known to his fellow-students that any one were guilty of the cruel amusements suggested by your correspondent, he would be instantly chased from the school to which he might belong.—I am, Sir, your obedient servant, T. W. Nunn, F.R.C.S. Middlesex Hospital, August 11." Mr. Nunn's letter has drawn from the Secretary a reply, which appeared in the *Times* of Thursday. The Secretary now speaks out. He writes:—"That vivisections are practised in certain metropolitan Medical schools I am now compelled to state openly. My proof is in the handwriting of the officials." The whole tenour of his letter would lead the public to believe that the physiological class-rooms of the London schools are constantly the scenes of the most wanton cruelty; that animals are "tortured to illustrate a lesson," and that Surgeons operate upon inoffensive creatures, "cutting off slices at a time as an artist chips off marble." The Medical Profession know how unfounded these allegations are, and we should not notice them here were it not for the purpose of giving an unqualified denial to the public at large. We can only class the letters of the worthy, but ill-informed Secretary, with the mass of sensation-writings which are welcomed by newspaper and magazine editors at a loss for stimulants to minister excitement to their readers at this dull season.

EUROPEANS AND EURASIANS IN INDIA.—Official returns show that the European population in India is much smaller than many persons suppose. Exclusive of the army and the wives and children of soldiers, it would not fill a thriving English town. At the census of 1861 the British-born in all India were 84,083 officers and men of the army, 22,556 civilians, and 19,306 women and girls. A certain number of soldiers marry Indian wives; and the children of the two races, known as Eurasians, or half-castes, amount to a considerable number. At the census of 1837 they exceeded the English in the city of Calcutta.

THE BRITISH ASSOCIATION.—The thirty-third annual meeting of the British Association for the Advancement of Science will commence in Newcastle-on-Tyne on Wednesday, the 26th inst., when the first general meeting will be held in the Town-hall, and the Rev. Robert Wills, M.A., F.R.S., will resign the chair, after which Sir W. G. Armstrong will assume the presidency and deliver an address. The Local, Executive, and General Committees in Newcastle are making ample preparations for the meeting of the Association, and the distinguished members from a distance who will attend the meeting will be entertained with unbounded hospitality by the northern people. The following gentlemen have been chosen presidents of sections:—Mathematical and Physical Science, Mr. W. J. Macquorn Rankine, C.E., LL.D., F.R.S., Professor of Engineering in the University of Glasgow; Chemical Science, Mr. Alexander W. Williamson, Ph.D., F.R.S., Professor of Chemistry in University College, London; Geology, Mr. Warrington W. Smyth, M.A., F.R.S., F.G.S., Professor of Mining and Mineralogy at the Royal School of Mines, London; Zoology and Botany, including Physiology, Mr. J. Hutton Balfour, M.D., Professor of Botany in the University of Edinburgh; Geography and Ethnology, Sir Roderick I. Murchison, K.C.B.; Economic Science and Statistics, Mr. William Tite, M.P., F.R.S.; Mechanical Science, Professor Willis, of Cambridge. Among the more interesting features of the meeting it is anticipated will be found the reading of papers descriptive of the great branches of industry in the district, such as coal mining, the glass and iron trades, iron shipbuilding, etc., and the excursions, which will be to the iron district of Cleveland, where the party will be entertained with magnificent hospitality by the iron masters of Middlesborough; to the lead mines of Mr. W. B. Beaumont, M.P., at Allanheads; to the Northumberland lakes and the Roman wall; to South Shields, Sunderland, and to Seaton Delaval, and other large collieries in the district. There will be an extensive exhibition of works of art and science held in the Central Exchange News-room, the Mayor of Newcastle will give a grand concert, and there will be several balls and other gaieties during the week of the Association's meeting. Sir William Armstrong will also make several great gun experiments upon Whitley Sands on one of the days of the meeting. A meeting of the General Local Committee was held at the Literary and Philosophical Association on Saturday afternoon, the Mayor in the chair. It was attended by Mr. Ingham, M.P., Mr. S. Beaumont, M.P., and a number of influential manufacturers. It was reported that the committee was only £450 short of the £4000 guaranteed by the town and district, and that balance would soon come in. Mr. Griffith, the general secretary of the Association, was present, and he expressed himself highly pleased with the arrangements made by the Executive Committee for the meetings.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. R. O. Clark.—The Royal College of Physicians.

S. H.—Consult the ablest Medical man at Surbiton, and ask him what Physician it would be most desirable to have in consultation, if needful.

Dr. M'K.—They will appear very shortly; but if our correspondent were to sit in the Editor's chair for a week, he would see the difficulty of ensuring insertion. Admission to the Guards' Ball was a trifle.

Mr. W. H. Dashwood.—1. It would depend upon whether the person were registered. 2. The law only recognises registered qualifications, and a registered person is only entitled to practise Medicine *or* Surgery *according to his qualification or qualifications.* An unregistered qualification would not be recognised in a court of law.

Chandler's Improved Chest Expanding Braces (66, Berners-street) appear well made, and well calculated to effect the object desired. No mechanical appliances ought to supersede the use of proper gymnastic exercises, conducted under the superintendence of a competent master, but if these be had, such mechanical supports as those of Mr. Chandler are of material service in restraining irregular muscular action, and counteracting bad habits. So far as we have tried them, they appear perfectly comfortable to wear.

Gold in British Columbia.—A gentleman from Victoria, writing from the spot on the 25th of March (received in Victoria on the 11th of April), reports that the above claims and Cameron's were all that were at work at that time on Williams's Creek. Work on all of them was prosecuted with much vigour. Cameron's claim yielded $3000 in 24 hours. "Hard Curry's on Sunday week yielded $11,000 to three men's work, 'washing' for eight hours. There were then 300 men on the creek. This report was confirmed by Mr. Hardy, who arrived in Victoria on the 14th of April from the place. He saw 873 ounces of gold washed from the Hard Curry claim in 24 hours, and 55lb. of gold in one day. To show the richness of the mine, the number of buckets of pay dirt washed was counted. "Each bucketful yielded on the average $12 37c. (£2 10s. 9d.) per bucket." The "bucket" is a common water-pail. In April the returns increased. Mr. Griffin, a merchant at Williams's Creek, left Richfield on the 7th, and arrived in Victoria on the 21st of April. This is the substance of his statement:—From the labour of two men "drifting" for 24 hours (in relays day and night) "78lb.-weight of gold was produced. Next day they took out 301 ounces from Diller and Co.'s claim. The total yield of this claim from February 28 to April 6 was $167,000. This enormous yield was obtained from a 'drift' only 40 feet long by 12 feet wide." The gold is "coarse," in pellets and small nuggets, imbedded in the gravel stratum as thick as peas sown in a bed. "Each share in this claim was held at $60,000" (or £12,000), selling price. "From the Barker claim $137,000 were taken during the winter, although part of the time no work was done, on account of the scarcity of water," the streams being frozen. "In seven hours' work on the 6th inst. this claim yielded 88 ounces. The Cameron claim increased its yield to from 80 to 100 ounces a-day. The 'pay dirt' in it is 17 feet below the surface."—*Times' Correspondent*, Aug. 8.

Railways in England and America.—The peculiarity of railway travelling in England is, that all the ingenuity and activity of its organisers and directors appear to have been exhausted in adding to risks which are inevitably the aggravation of every danger and discomfort that the commonest caution or consideration for the lives and limbs of their fellow-creatures might prevent, and does, in fact, in other civilised countries, continually and systematically prevent. It is not enough that whenever a train approaches a station the lives of hundreds of human beings are at the mercy of an overworked or sleepy pointsman; that, as it happened a day or two since on the Lynn and Hunstanton line, a bullock may stray across the rails and avenge its stupid fate by turning half a dozen carriages completely over, and crumpling up their innocent occupants; but, by that coarse and careless indifference to anything but fares and dividends which is characteristic of railway administration in this country, some single passenger may be shut up like a felon, and carted along like a sheep to the slaughter, or left to be burnt alive, or murdered in a tunnel, or assassinated in the midst of a smiling landscape, without hope of aid, or escape, or appeal. And these are the minor miseries of our railway travelling system which the department supposed to acknowledge a certain responsibility in such matters considers "well worthy of consideration," and does absolutely nothing to alter or amend, beyond a fitful "circular" once and again when something more horrible than usual has occurred. Surely, while we are criticising, with all the severity of a people who own an inexhaustible storehouse of genius at the Horse Guards, the military shortcomings of our kinsmen across the Atlantic, it might be well for us to pause for a moment to compare the humane provisions for the safety of life on an English line of railway with those which are adopted, as the *Engineer* reminds us, "upon no less than 34,000 miles of railway in North America." There we find an uninterrupted communication along the line of cars, not only between the guards and the passengers, and between the guards and the engine-driver, but between every carriage and the engine, by the simple means of a signal rod, within reach of every passenger. Nor is it practically found that this elementary precaution is abused by the vulgar folly of idle hoaxers. Yet no railway company in this country has thought it worth the trouble or the expense, or perhaps worthy of its dignity, to imitate so sound and sensible an example. Our legislature, with all its ceaseless pharisaic babble, and its religious respect for vested abuses, has done nothing to correct the barbarism of irresponsible companies; our smirking Board of Trade goes to sleep on its circulars, and railway travelling in England is still to railway travelling in the United States what an English mail-coach thirty years ago was to a French diligence of the same period.—*Daily News.*

ARMY MEDICAL DEPARTMENT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can any of your readers inform me, accurately, how many vacancies there are in the Army Medical Department, and how many candidates are now under examination?

August 10. I am, &c. CRUX.

A QUERY.—ILL-SMELLING FEET.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Can any of your correspondents give me a sure remedy for that most distressing complaint, foul, ill-smelling feet, not depending on uncleanliness? I am, &c.

G. H. R.

ECZEMA AND PARASITIC GROWTHS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—My attention has been directed to a letter in your Journal of last Saturday in which Mr. Jabez Hogg complains of the inaccuracy of the following sentence in my lectures upon "Eczema:" "Mr. Jabez Hogg, who professes to find parasitic growths in all skin diseases, would probably have made use of this case in support of his views." On referring to his paper in the *Quarterly Journal of Microscopical Science*, p. 51, I find I ought to have said "in nearly all kinds of chronic skin diseases" instead of "in all skin diseases." I am, &c.

6, St. George's-road, Glasgow, August 11. T. MCCALL ANDERSON.

THE CASE OF PROFOUND AND PROLONGED SLEEP.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Permit me to reply to Dr. Gimson's letter which appeared in your last number.

The case of remarkably profound and prolonged sleep which you published in this Journal has been under my observation ten years. I visited the patient some time since, and saw him several times both awake and asleep. When I was consulted at the end of last year, I was distinctly informed by the friends of the patient that he was under no Medical treatment whatever, as all the Medical men in the neighbourhood had seen him, and were of one opinion,—that remedies were useless. Having received these assurances, I promised to bring the case before the Profession.

Dr. Gimson, I doubt not, will agree with me, that it is at least a very singular accident—as his notes were taken in 1860—that we should both publish the same case in different Journals within two months of each other, and that our reports should be so much alike in detail and arrangement. I am, &c. J. WARD COUSINS, M.D. Lond., F.R.C.S.

26, Lion-terrace, Portsmouth, August 11.

INDIAN SANITARY REFORM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—If not trespassing already too much on your valuable space, will you kindly permit me to refer such of your readers as take an interest in the Indian Sanitary question to the *London Medical Gazette* of January 1, 1847, and August 3, 1849, (a) where the matters referred to are largely treated of. Also to the *Bombay Medical Transactions*, (b) (those who may have access to them) vol. v., for the non-antiphlogistic and quinine mode of treatment of remitting fever, as tending greatly to lessen the frequency of hepatic abscess as a sequel. The advantage of the same mode of treatment in dysentery was given in a report from Madras in 1844 or 1845, but whether published I do not know, having finally left India, in broken health, in the latter year. For consumption in India, too, aneurisms, and heart disease, might be referred to Vols. I., II., and III. of the *Bombay Medical Transactions*, where many of the cases are detailed more or less at length; and to the *Indian Journal of Medical Science* (Pearson's, afterwards Corbyn's, Calcutta), during the years 1834, 1835, and perhaps 1836. These last cases I deem more valuable, the diagnosis and prognosis being given at once, and then (often some numbers after), when the result became known, the autopsy. I am, &c.

R. H. A. HUNTER, 1st Class Staff-Surgeon, half-pay.

Dollar, August 10.

THE INDUCTIVE LOGIC OF BACON.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—At page 98 *ante* you have some remarks on recent startling opinions by Baron Liebig as to the value of what is called the inductive philosophy of Bacon in Medical science. It may interest some readers, and would be only fair to state that this remarkable and most brilliant and true address appears in the current volume of *Macmillan's Magazine*. Nobody opposes the Bacon method in Medicine more than Bacon himself. Bacon's style is the most perfect, perhaps, in the language, but his science is worthless; it was put into Latin by a person he employed for the purpose—a schoolmaster. The favourite instance of induction in Medical "Introductories," that the valves of the veins led Harvey to think the current of the blood led in that direction, is shown to be an anachronism and a fable.

We have a dozen puzzles in modern Medicine, owing to a neglect of what Liebig teaches. We have a score of popular errors as to chloroform, arising from hasty generalising. As we were told in a leading Journal, from hasty statistics by Mr. Solly, that tobacco is the chief source of insanity, and then railway travelling, so now as to chloroform, we are informed that only one side of the question ought to be heard, and any petty chloroform generalisation or quackery, opposed as it is to thousands of direct experiments, so as it is well advertised, must be true. Again, Dr. Mayo is at a loss for statistics as to the relative value of wine and the lancet in pneumonia; but the statistics are offered in vain to Sir Charles Hasting's Association if they blindly shut their eyes to the proper mode of their interpretation. We have, in fact, now on one side this Association and its addresses in Medicine, but on the other the masterly addresses of the late Prince Consort, Baron Liebig, John Stuart Mills, Bacon himself, and of all the Profession all over the world.

We have a very perfect specimen of the *de*-ductive logic of Liebig, or grouping of cases in Mr. H. Thompson's classification, of the danger of lithotomy at special ages—as correct as the tables of a life insurance actuary. So have we abounding instances of the relative value of the lancet and calomel in pneumonia, as compared to the plan of Dr. Hughes Bennett. So have we statistics of the most valuable kind as to chloroform accidents; but it is most unfair that certain Journals will only hear one side of such things, to the delight of charlatans and spread of illegitimate Medicine. I am, &c.

Sackville-street, July 27. CHARLES KIDD, M.D.

(a) These, so long ago, I had forgotten.

(b) The *Bombay Medical Transactions* being properly the property of the Bombay Government could only be had (some years ago, at least) by members of the Bombay Medical and Physical Society, from Richardson, of Cornhill, London.

COMMUNICATIONS have been received from—

Dr. ROBERT OKE CLARKE; APOTHECARIES' HALL; T. C. R.; UNIVERSITY OF LONDON; G. H. R.; Mr. CHANDLER; Dr. J. WARD COUSINS; Mr. W. OWEN; Dr. T. MCCALL ANDERSON; Dr. W. B. BOWMAN; Mr. J. S. BRAZIER; Mr. R. G. WHITFIELD; CRUX; Mr. D. MCKECHNIE; INQUIRER; Mr. HERBERT SPENCER; Dr. C. A. WATERWORTH; S. H.; Dr. R. H. A. HUNTER; Dr. W. WATSON CAMPBELL; Dr R. WALKER; Dr. W. B. HERAPATH; Dr. W. B. CARPENTER; Mr. H. LOWNDES; Mr. J. ROBERTSON; Mr. R. B. CARTER.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 8, 1863.

BIRTHS.

Births of Boys, 919; Girls, 853; Total, 1772.

Average of 10 corresponding weeks, 1853-62, 1683·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	728	674	1402
Average of the ten years 1853-62	613·4	588·9	1202·3
Average corrected to increased population..	..	..	1252
Deaths of people above 90	1	..	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	5	2	10	2	5	5	30
North ..	618,210	12	5	27	4	2	13	42
Central ..	378,058	10	2	13	3	5	4	24
East	571,158	17	4	40	4	3	16	36
South ..	773,175	5	4	25	2	7	11	52
Total.. ..	2,803,989	49	17	115	15	22	49	184

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·837 in.
Mean temperature	60°
Highest point of thermometer	82·9
Lowest point of thermometer	51·1
Mean dew-point temperature	58·8
General direction of wind	S.W.
Whole amount of rain in the week	0·19 in.

APPOINTMENTS FOR THE WEEK.

August 15. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

17. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

18. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

19. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

20. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

21. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

DR. DE JONGH'S

(Knight of the Order of Leopold of Belgium)

LIGHT-BROWN COD-LIVER OIL.

SELECT MEDICAL OPINIONS.

Sir HENRY MARSH, Bart., M.D., Physician in Ordinary to the Queen in Ireland:—"I consider Dr. de Jongh's Cod-liver Oil to be a very pure Oil, not likely to create disgust, and a therapeutic agent of great value."

Dr. BARLOW, Senior Physician to Guy's Hospital:—"I have been well satisfied with the effects of Dr. de Jongh's Cod-liver Oil, and believe it to be a very pure Oil, well fitted for those cases in which the use of that substance is indicated."

Dr. LANKESTER, F.R.S., late Lecturer on the Practice of Medicine, St. George's School of Medicine:—"I consider that the purity and genuineness of this Oil are secured in its preparation by the personal attention of so good a Chemist and intelligent a Physician as Dr. de Jongh, who has also written the best Medical Treatise on the Oil with which I am acquainted. Hence I deem the Cod-liver Oil sold under his guarantee to be preferable to any other kind as regards genuineness and medicinal efficacy."

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Contracted Chests, and other Deformities of this class, are effectually cured by CHANDLER'S IMPROVED CHEST-EXPANDING BRACES for both sexes, of all ages. Their action is to carry the weight of the shoulders off the chest, and throw the arms behind the body, thus causing the wearer to walk and sit perfectly erect, and are especially recommended to children for assisting the growth, preventing deformities, and producing a noble and symmetrical figure, superseding the old braces and stays.

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and BANDAGE MANUFACTURER, 37, LUDGATE-STREET, LONDON, begs to call attention to his superior Stock of Surgical and Dental Instruments, Trusses, Elastic Stockings, &c., unequalled for quality and Style, and most moderate in price. From long practical experience, M. J. L. is able to guarantee all Instruments from his house perfect as to finish, and of the most approved kind.

Cases of Pocket Instruments from 20s.; Tooth Instruments, 20s.; Dissecting, 10s.; Midwifery, 10s.; Enemas from 5s. in case; Trusses from 18s. per dozen, all warranted. Any Instrument not approved at once exchanged. Any instrument not on stock sent per return post.

5 per cent. discount allowed for cash. A price list sent post free.

Please address in full, as above, to prevent mistakes.

Varicose Veins and Supporting Bands.

—SURGICAL ELASTIC STOCKINGS and KNEE CAPS, pervious, light in texture, and inexpensive, yielding an efficient and unvarying support, without the trouble of lacing. Likewise, a strong, low-priced article for Hospitals and the Working Classes. ABDOMINAL SUPPORTING BANDS for both Sexes; those for Ladies' use, before and after accouchement, are admirably adapted for giving adequate support with extreme lightness—a point little attended to in the comparatively clumsy contrivances and fabrics hitherto employed. Instruction for measurement and prices on application, and the articles sent by post from the Manufacturers and Inventors, POPE and PLANTE, 4, Waterloo-place, Pall-mall, London, S.W.

The Profession, Trade, and Hospitals supplied.

Pillischer's New £5 Prize Microscope.

"We have carefully examined the Microscope in question, and find it to be an excellent instrument, fit for almost any description of scientific investigation. Indeed, it is a marvel of cheapness; the stage movement and the object-glasses being worth, without the stand, the whole of the money."—Lancet, May 24, 1862.

"We have carefully examined the instrument which Mr. Pillischer designates the 'New £5 Prize Microscope,' and find its merits of a very high order. The quarter-inch shows the *Pleurosigma hippocampus* beautifully, and works well on a Podura scale. The half-inch has a flat field and excellent definition. Several which we examined stood tests that we scarcely thought it fair to apply, and the one-inch is a thoroughly good working power."—Intellectual Observer, Feb., 1863.

Also see "Microscopical Journal, July, 1862.

The instrument is constructed upon a solid principle, has coarse and fine adjustments, and a mechanical stage of great simplicity and usefulness; a concave mirror, one eye-piece, condenser for opaque objects, an object-glass which divides into 1-inch, ½-inch, and ¼-inch powers; the whole packed into a neat mahogany case, £5;

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ORIGINAL LECTURES.

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THE LECTURES ON THE VERTEBRATE SKULL.

The principal bones which surround the oral cavity in the Pike are disposed, as in Man, in pairs, some being in front of and above the oral aperture, while others are behind and below that aperture; and they inclose the buccal and pharyngeal chambers.

The anterior pair of pre-oral bones (*Pmx.*), small, and beset with teeth upon their under surfaces, are connected with the vomer and the termination of the cartilaginous rostrum formed by the internasal septum. They obviously answer to the human pre-maxillæ. An elongated bone (*Mx.*), which bears no teeth, is connected anteriorly with the pre-maxilla, and, lying external to the other pre-oral bones, forms the boundary of the gape. Its homology with the maxilla of Man appears to be unquestionable. A second smaller bone is connected with the posterior part of the upper edge of the maxilla, and is usually regarded as a subdivision of it.

Behind the pre-maxillæ, and internal to the maxillæ, in the situation occupied by the palatine and pterygoid bones in Man, the Pike has an osseous arch of much greater complexity and somewhat different connexions.

FIG. 24*a*.

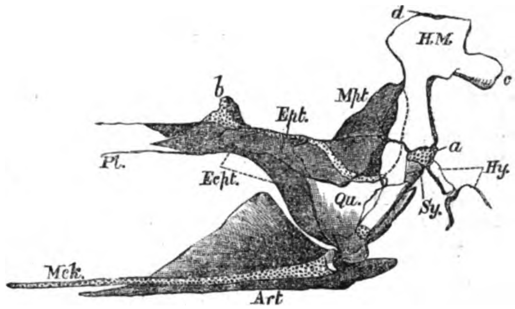


FIG. 24*a*.—Palato-quadrate arch, with the hyomandibular and symplectic, the articular piece of the lower jaw, and Meckel's cartilage, of the Pike, seen from the inner side. *a*, the cartilage interposed between the hyomandibular and the symplectic; *b*, that which serves as a pedicle for the pterygo-palatine arch; *c*, process of the hyomandibular with which the operculum articulates; *d*, head of the hyomandibular which articulates with the side of the skull.

The summit of this "palato-quadrate" arch is movably articulated by a cartilaginous pedicle with the outer surface of the pre-frontal process of the skull. The anterior crus of the arch stretches forwards, parallel with the vomer, to the pre-maxilla; its posterior crus extends backwards, and, spreading out, ends in an upper (*Mpt.*) and a lower (*Qu.*) prolongation.

Five bones enter into the composition of the arch—two median, two posterior, and one anterior. The median bones are so disposed that their anterior ends embrace the lower part of the cartilaginous pedicle (*b*), the one lying more external, and the other internal, to the latter. The more external has been termed "*ectopterygoid*."(a) It exhibits a short, ascending process, running up towards the pre-frontal, and strengthening the cartilaginous pedicle—an anterior process which articulates with the bone *Pl.* and a posterior arched prolongation, which descends in front of the bone *Qu.*, and articulates with its anterior edge. The internal bone, called "*entopterygoid*" (*Ept.*), is a nearly straight, flat bone, the anterior half of which is applied, like a splint, to the inner face of the ectopterygoid, while its broader posterior face is similarly adjusted above to the bone *Mpt.*, and below to the bone *Qu.* The two last-mentioned "posterior" bones of the arch are termed respectively the "*metapterygoid*" and the "*quadrate*" bones. The former is a broad, four-sided bone, convex upon its inner surface, which presents a raised, curved ridge, beneath which the entopterygoid is received anteriorly and the hyomandibular posteriorly. It is connected below with the quadrate bone, and, behind, it overlaps the hyomandibular (*H.M.*) and the symplectic (*Sy*).

The os quadratum (*Qu.*), so termed, not on account of its form, which is triangular, but by reason of its identity with a bone called by the same name in Birds and Reptiles, presents inferiorly an articular head, with an elongated articular surface, convex from before backwards, for the lower jaw. On the posterior part of its inner surface it has a deep groove, directed from above downwards, very nearly parallel to its posterior edge. Into this the symplectic is received.

The anterior bone (*Pa.*), lastly, is elongated and flattened, and bears teeth upon its lower surface. It is received anteriorly into the re-entering angle between the vomer and the pre-maxilla and maxilla. It is usually regarded as the palatine bone.

Before attempting to discuss the homologies of these several constituents of the palato-quadrate arch in the fish, it will be necessary to take into account the nature and arrangement of its post-oral facial bones.

In Man, the post-oral bones are arranged in two arches—the mandibular and the hyoidean; or, more strictly speaking, since the hyoidean arch is really composed of two, indicated by its lesser and greater cornua, there are three post-oral arches.

In the Pike the lower jaw forms a mandibular arch, obviously corresponding in a general way with that of Man; behind this follows a second arch, answering to the styloid processes, stylo-hyoid ligaments, and cornua minora of the human hyoid, but with much greater masses of bone entering into its composition; and this is succeeded by no fewer than five other arches, the four anterior of which, supporting the gill filaments, are termed the "*branchial arches*," while the last pair, which carry no branchiæ, and are much smaller than the others, are called the "*inferior pharyngeal bones*."

The symphysis of the lower jaw is formed by the ligamentous union of two bones, which carry the inferior teeth of the Pike, and correspond respectively with the rami of the human mandible. But, besides these *dentary* bones (*D*, Fig. 18), each half of the lower jaw of the Pike has two other constituents, which are not represented in the human lower jaw. One of these is a small bone, which forms the lower part of the angular process of the jaw. It is termed the *os angulare*, or angular piece (*An*, Fig. 18). The other is a large triangular bone, which fits in between the dentary and the angular, and is termed the articular (*os articulare, Ar.*), because on its upper surface it bears a concave articular fossa, into which the condyle of the quadrate bone is received (Fig. 24). The cartilage which partially forms the walls of this fossa is continued into a long tapering rod, which lies upon the inner surface of the articular and of the dentary, and terminates in a point shortly before reaching the symphysis (*Mck.*, Fig. 24).

This rod of cartilage affords a safe basis upon which to found a homological argumentation. For it most certainly corresponds with Meckel's cartilage in the human fœtus, and the dentary bone lies outside it in just the same way as the dentigerous ramus of the human mandible lies outside Meckel's cartilage. But the articular bone is an ossification in and around the proximal end of Meckel's cartilage in the Pike, just as the *Malleus* is an ossification in and around the proximal end of Meckel's cartilage in the human fœtus; and the *os quadratum* is related to the *os articulare* of the fish in the same way as the *Incus* is related to the *Malleus*.

Hence it is to be concluded, in the absence of any evidence to the contrary, that the articular piece of the Pike's lower jaw answers to the *Malleus* and the quadrate bone to the *Incus*.

I am not aware that any evidence can be adduced against this view; but, on the other hand, the relations of the parts thus identified to the *portio dura* of the seventh nerve in Man and in the Fish seem to me to afford it much support.

The *portio dura* in Man perforates the *pars petrosa*, and, after skirting the inner wall of the tympanum, external to the labyrinth, leaves the skull by the stylo-mastoid foramen. But before it does so, however, it gives off a recurrent branch, the *chorda tympani*, which takes a very singular course—passing between the pyramid, which is the upper end of the hyoidean arch, and the tympanic bone, entering the tympanum, crossing the auditory ossicles to make its way out at the front wall of the tympanum, between the tympanic and the squamosal, then uniting with the gustatory division of the trigeminal, and passing down along the inner side of the ramus of the mandible with it, until eventually it leaves it to become connected with the submaxillary ganglion.

(a) Not to multiply names unnecessarily, I adopt this term, which involves no theoretical implications. It must be carefully borne in mind, however, that this "ectopterygoid" has nothing to do with the "external pterygoid" process of Man.

The principal portion of the *portio dura*, on the other hand, makes its way out by the stylo-mastoid foramen, and is distributed to the facial muscles, some comparatively insignificant branches only being furnished to the levators of the hyoidean apparatus and depressors of the lower jaw. But, as has been already stated, the facial muscles, so important and largely developed in Man, become insignificant in the lower vertebrates, and are not represented at all in the Fish. Hence, in the latter, we might expect to find only mandibular and hyoidean branches of the *portio dura* corresponding with the *chorda tympani* on the one hand, and the stylo-hyoidean and digastric branches, on the other, in Man. And this is really the case. For the *portio dura* of the Pike, which leaves the skull by a special foramen in the pro-otic bone, traverses the hyomandibular bone, and then divides into two branches, one of which runs backwards to the hyoidean arch, while the other, directed forwards and downwards, passes to the inner side of the quadrate bone, and over its articulation with the *articulare* to the inner surface of the lower jaw, along which it runs to the extremity of the ramus. This last branch is obviously the representative of the *chorda tympani*, and its relations to the quadrate and articular bones are, it will be observed, quite similar to those which the corresponding nerve has to the *incus* and *malleus* in Man.

Holding fast, then, by this determination of the homologies of the *articulare* and *quadratum*, what is the nature of the other bones entering into the palato-quadrate arch?

The *Metapterygoid* may perhaps answer to the *os orbiculare*. The manner of its connexion with the quadrate (*incus*) suggests this view; for which, however, I cannot pretend to offer any positive proof.

That the other three bones answer in a general way to the pterygo-palatine bones of Man is certain. The pterygoid of Man, it is true, is in no way connected with the incus, while both bones *Ecpt.* and *Ept.* are united with the quadratum. But this is in reality no difficulty, for we shall find that, in the higher oviparous vertebrata, the *os quadratum* is very generally connected with a bone which is universally admitted to correspond with the pterygoid of Man.

Again, both the palatine and the pterygoid bones of Man are articulated with the base of the skull, while the palato-pterygoid arch of the Fish is not directly connected with any of the basi-cranial bones; but in many of the higher vertebrata the pterygo-palatine arch is almost as free of the base of the skull as in the Fish.

No doubt, then, the palato-pterygoid bones of the Fish, taken together, answer to the palato-pterygoid bones of the Man; but it is a very difficult matter to identify the separate constituents of the two arches.

One of the most striking features of the palatine bone, not only in Man but in *Vertebrata* generally, is its articulation with the pre-frontal or lateral mass of the ethmoid. If, guided by this character, we seek for the homologue of the palatine in the Fish, the so-called "ectopterygoid" alone satisfies the conditions. But if this bone be the homologue of the true palatine, the bone *Pl.* must be regarded as a dismemberment, or subdivision of the palatine (b), and the entopterygoid will take the place of the true pterygoid.

The palato-quadrate arch, with the lower jaw, is immediately suspended to the skull only by the articulation of the cartilaginous pedicle, *b* (Fig. 24) with the pre-frontal, none of the posterior elements of the arch being directly articulated with the skull. They are indirectly united with the latter, however, by two very remarkable bones, the *Hyomandibular* (*H. M.*) and the *Symplectic* (*Sy*).

The *os hyomandibulare* is a broad flattened bone, somewhat constricted in the middle, and divided below into an anterior and a posterior process. The upper convex edge of the bone (*d*, Fig. 24) fits into an elongated, concave, glenoidal fossa, bounded by the squamosal, opisthotic, and pro-otic bones, and swings freely therein, in a plane perpendicular to the longitudinal axis of the skull. The large anterior inferior process articulates by its anterior edge and outer face with the metapterygoid, while below it is united by a persistent synchondrosis with the irregular styliform bone, the *Symplectic*, which is firmly fitted into the groove already described upon the inner face of the quadrate bone.

The connexion thus established between the Hyomandibular and the symplectic, is strengthened externally by the firm apposition of a curved elongated bone, the *Pre-operculum*, to the hyomandibular above and to the quadrate bone below.

The Hyoidean arch consists of two median bones, an anterior, the "*entoglossal*," which supports the tongue, and a posterior, the "*urohyal*." Its lateral cornua are formed by four bones, two small (*basi-hyal*), and two large (*epi* and *cerato-hyals*) on each side, the latter supporting the "branchiostegal rays" on which the branchiostegal membrane is spread out; and the upper of the two larger bones is connected with the synchondrosis between the hyomandibular and symplectic by a styliform bone—the *Stylo-hyal*. Thus, the hyomandibular may be regarded as common to the mandibular and the hyoidean arches, supporting the former, indirectly, by means of the symplectic, and the latter directly, by means of the stylo-hyal.

The stylo-hyal very probably corresponds with the styloid process and pyramid of Man, but it is difficult to find any very sure footing for our interpretations beyond this point.

The manner in which the symplectic is connected, on the one hand, with the representative of the *incus*, and, on the other hand, with that of the styloid process and pyramid, is strongly suggestive of a relation between this bone and the stapes. But it must no less be admitted that similar arguments might be used in favour of the stapedial character of the hyomandibular bone, the articulation of which with the pro-otic and opisthotic might be compared with the fitting in of the stapes into the *fenestra ovalis*, which is bounded by these two bones; or again, plausible arguments might be brought forward in favour of the view that the hyomandibular, at any rate, is a bone special to fishes. At present, it may be well merely to indicate these various possibilities, as the study of development has hardly been carried sufficiently far to enable us to decide in favour of one rather than of another.

Each of the four anterior branchial arches is composed of four bones, and the branchial arches of opposite sides are united by connecting cartilages and median ossifications. The anterior or first arch, which corresponds with the greater cornu of the hyoid of Man, is fixed to the pro-otic bone, between the exits of the trigeminal and the *portio dura* by cartilage. The succeeding arches have no osseous or cartilaginous representatives in Man. The branchiostegal rays attached to the epihyal and cerato-hyal are in like case.

Three bones, the *operculum* (*Op.*), *sub-operculum* (*S. Op.*), and *inter-operculum* (*I. Op.*), are developed within the membranous gill cover, and serve to strengthen it. The operculum is articulated with the posterior and inferior process of the hyomandibular bone; the inter-operculum is connected by ligament with the angular piece of the jaw, the sub-operculum lies between the two.

The gill cover is developed from the outer surface of the second visceral arch, and corresponds with the concha of the ear in the human subject; and as this part contains no osseous elements in the human subject, it is obviously in vain to seek for the homologues of these bones in Man.

The *pre-operculum*, which, as I have stated above, binds together the hyomandibular and the quadrate bone externally, has been compared with the tympanic bone of Man, and the position of the bone and its relations to the representatives of the *ossicula auditûs* are certainly not altogether unfavourable to this view.

These are the most important bones in the Pike's skull, but several yet remain for consideration.

Thus there is a small, oval, *supra-orbital* ossicle (*S. Or.*, Fig. 18) attached to the outer margin of the frontal, above the orbit, and an inverted arch of *sub-orbital* bones which bound the orbital cavity externally and inferiorly. The sub-orbital series consists of a large anterior bone, which lies beside the nasal, and of five or six smaller bones, the hindermost of which is connected with, or attached close to, the post-frontal.

Finally, in the Pike, a forked bone, the *supra-scapula*, suspends the scapular arch to the apices of the squamosal and epiotic bones. This bone, it need hardly be said, is without a distinct osseous representative in Man.

The merely anatomical comparison of the facial bones of the Pike with those of Man thus leads to a conclusion very similar to that attained by the examination of the bones of the skull proper. There is a certain identity of fundamental plan upon which special structural peculiarities are superadded in each case. Both types of skull exhibit many bones in common, but in each type, some of these bones acquire special arrangements and very different relative magnitudes; and each type exhibits bones peculiar to itself, the number of those present in the Fish and absent in the Man being very much greater than of those present in the Man and absent in the Fish. As might be expected, the study of the development of the Fish's cranium brings out into still stronger light the fundamental resemblances of its structure with that of the higher vertebrates. The primitive groove makes its appearance on the blastoderm, and becomes converted into a canal by the arching over and coalescence of the dorsal laminæ. The anterior part of the canal dilates and becomes subdivided into cerebral vesicles. The notochord appears and terminates in front in a point behind the pituitary body; while round its apex, that bend of the primitive cranium takes place which constitutes the cephalic flexure. The organs of sense make their appearance in the same regions, and the visceral arches and clefts are developed in the same way. But a greater number of them are developed, and the posterior ones, instead of vanishing, give rise to the branchial skeleton and branchial clefts. The mandible is developed in the first visceral arch, and the hyoid apparatus in the second, as in Man; but the details of the mode of origin of the hyomandibular and symplectic, of the palatine and maxillary apparatus, and of the naso-frontal process have not been as yet worked out with sufficient thoroughness to enable us to determine with certainty the homology of all the resulting parts.

(b) Looking upon *Pa.* and *Ecpt.* as one bone homologous with the palatine of Man, it will be found that in osseous Fishes the separation between them takes place sometimes in front of the pre-frontal articulation, as in the Pike, sometimes behind it, as in the Cod and most bony fishes.

The cranium is at first wholly membranous, but after a time it becomes partially chondrified in the same way as in the higher vertebrates. (Fig. 25.) Cartilage appears in the base of the skull upon each side of the notochord, and surrounds the great auditory capsules. Anteriorly it divides into two processes, the *trabeculæ cranii*, which separate so as to inclose the pituitary fossa *P*, and reunite in front of it to form the ethmo-vomerine rostrum. From the floor of the skull, at the front and lateral part of each auditory capsule, a cartilaginous process *HM*. is given off, and passing downwards and forwards ends in a free styliform process, which lies parallel with, and bound by connective tissue to, the free hinder crus of an inverted arch of cartilage, the anterior crus of which passes into the pre-frontal region of the ethmo-vomerine cartilage. The centre of this palato-quadrate arch is prolonged into a process *Qu.*, which articulates with the cartilaginous ramus of the mandible, while the upper part of the cartilage *HM. Sy.* gives attachment to the cartilaginous hyoid.

FIG. 25.

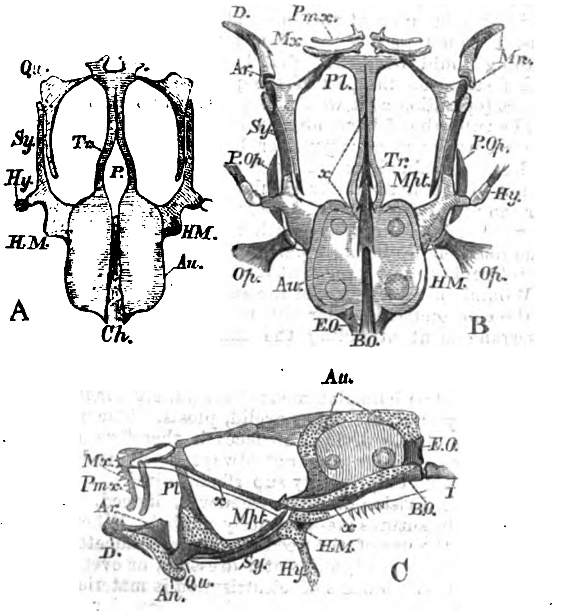


FIG. 25.—The cartilaginous and partially ossified crania of young Sticklebacks (*Gasterosteus*). A, in a very early, B, in a more advanced, condition, from above; C, B viewed from the side; *Ch.* notochord; *Au.* auditory capsules; *P*, pituitary fossa; *Tr*, trabeculæ; *x*, parasphenoid; *H.M.*, *Sy.*, *Qu.*, indicate not only the bones, but the pre-existing cartilages.

This is the earliest condition of the cartilaginous cranium of the osseous fish that has yet been observed; but it can hardly be doubted that the hyomandibular and palato-quadrate cartilages have already deviated considerably from their primitive condition, and it would be a matter of great interest to ascertain whether these cartilages are primitively continuous; or whether, on the other hand, the hyomandibular altogether belongs to the second visceral arch, while the hinder crus of the palato-quadrate belongs to the first, but has become detached from its primitive connexion with the *basis cranii*.

The basi-occipital originates as an ossification, which immediately surrounds and incloses the end of the notochord, and extends into the adjacent cartilage. The ex-occipital is developed within the substance of the cartilaginous cranium on each side of the basi-occipital. The parasphenoid, on the other hand, is developed as a superficial ossification in the perichondrium of the base of the skull, and extends in front of, and behind, the pituitary fossa in this membrane. The pre-maxillæ and maxillæ have no cartilaginous predecessors, nor have the dentary and angular pieces of the lower jaw. The palatine is developed around, if not in, the anterior crus of the palato-quadrate arch; the metapterygoid in the same relation to its posterior crus; the quadrate in its inferior process. The symplectic is a cortical ossification of the styliform part of the hyomandibular cartilage, the ossification of the latter giving rise to the hyomandibular bone itself.

In many osseous fishes, such as the Carp, the cartilaginous cranium disappears, with age, as completely as it does in Man; but, in the Pike, it not only persists, but grows and enlarges with age, so that the relations of the cranial bones to cartilage or to membrane can be investigated at any period of life.

FIG. 26.

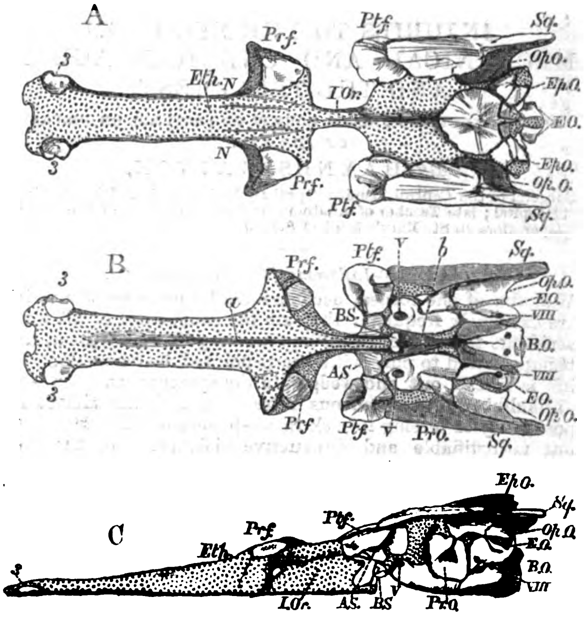


FIG. 26.—The cartilaginous cranium of a Pike, with its intrinsic ossifications viewed, A, from above; B, from below; C, from the left side. *N*, *N*, nasal fossæ; *I.Or.* inter-orbital septum; *a*, groove for a median ridge of the parasphenoid; *b*, canal for the orbital muscles.

If the skull of an adult Pike be macerated, or, better, steeped for a short time in boiling water, a number of the cranial bones will separate with great ease from a sort of model of the skull chiefly composed of cartilage.

This "cartilaginous skull" forms a complete roof over the cranial cavity (*A.*, Fig. 25), whence it is continued, without interruption, to the anterior end of the cranium, forming the narrow inter-orbital septum and the broad internasal rostrum, and giving rise to two antorbital processes, which separate the orbits from the nasal chambers, and are perforated by the olfactory nerve and by the nasal division of the fifth.

The inter-orbital cartilage is interrupted by an oval space filled with membrane, just in front of the basi-sphenoid, so that it is continued to the lower end of that bone only by a slender cartilaginous rod, which passes into the stem of the Y-shaped basi-sphenoid.

The cartilaginous basis of the skull, therefore, is not continued back along the floor of the canal for the orbital muscles. The roof of the orbital canal contains cartilage in the middle line, which is almost completely hidden in front by the extension towards one another of the horizontal laminæ of the pro-otic bones. The under surface of the inter-orbital septum and of the greater part of the cartilaginous rostrum is marked by a deep groove (*a*, Fig. 25, *B*.), into which a median ridge of the parasphenoid is received.

The bones which, being developed in perichondrium, are easily removed from the macerated skull, are the parietals, the frontals, the bones 1.1. and 2.2., the squamosals (when these are not anchylosed with the opisthotic bones), the vomer, and the parasphenoid.

The bones which, as ossifications of the substance of the cartilaginous cranium itself, are not thus separable, are the basi-, ex-, and supra-occipitals, the three periotic bones, the ali-sphenoids, the basi-sphenoid, the post frontals, the pre-frontals, and the bones 3.3.

Thus, in a certain sense, the adult skull of the Pike may be said to represent, in a persistent form, a condition of the skull which is transitory in Man.

Let the sides of the human fœtal cartilaginous cranium grow up and unite in the roof of the skull; let the pre-sphenoidal, ethmoidal, and internasal portions be greatly elongated; let no distinct ossification take place in the pre-sphenoidal and orbito-sphenoidal regions, or in the part answering to the lamina perpendicularis, while the basi-sphenoidal ossification remains very small, and that cranium would put on the most important and striking characters of that of the Pike.

INJURIES TO THE EYE FROM MECHANICAL AND CHEMICAL AGENTS, AND THE TREATMENT.

BEING SELECTIONS FROM A COURSE OF LECTURES ON DISEASES OF THE EYE.

By HAYNES WALTON,

Surgeon to the Central London Ophthalmic Hospital, and to St. Mary's Hospital; late Teacher of Anatomy and Demonstrator of the Surgical Operations in St. Mary's Medical School.

Wounds—Inflammation of the Eye-ball.

Wounds of the cornea, accompanied by prolapse of the iris, are extremely frequent; they are the commonest of all severe accidents to the eye. Children are very liable to them, from being allowed to play with sharp-pointed instruments. The iris is forced out and wedged in the aperture, and hence the unlikelihood of spontaneous retraction, and the almost impossibility of forcing it back through the same aperture without unjustifiable and destructive violence. In the great majority of cases, the injury causes the lens and its capsule to lose their transparency, and the opacity may commence in a few hours, or not be manifested for days, weeks, or even months.

With a central wound a very slight prolapse may close the pupil, and the worst class of cases is where there is a considerable rent, the anterior chambers being destroyed by the iris being in contact with the cornea.

Although attempts at reduction of the iris are not always, I believe, necessarily fruitless—for I could mention authenticated examples to the contrary—yet success must be regarded as a very rare exception. It is only with slight prolapse that it can ever be attained, and then at a very early period, that is, while the accident is quite recent, and before cicatrisation or repair has set in. The fact is, that the iris cannot be pushed back even when there is a large wound in the cornea, as we can thrust a bit of lint into a cavity; for whether the aqueous humour be present or has been discharged, the action of the several orbital muscles and the natural elasticity of the coats of the eye, maintain a tolerably close adaptation between the containing and the contained parts, so that in reality no cavity exists, and any benefit in the way of reduction must be looked for in those cases in which the iris is so slightly incarcerated that its action is not quite destroyed. By acting on it, then, with a solution of atrophia, the object may be attained, and I should not restrict the trial to cases merely of prolapse of the pupillary edge, as has been recommended, but employ it also when the circumference has been prolapsed; for dilatation of the pupil cannot be produced without traction being exerted on that part of the iris which is forced out, be the hernia where it may. As it cannot be told beforehand how tightly the iris is retained in the wound, the atropine should always be used.

It fortunately happens at times that, although the cornea is much divided, the iris merely rests against, and blocks up the wound, but does not prolapse. Within an hour after the accident, I saw a boy whose cornea was split vertically in the entire diameter by something thrown at him. The iris did not prolapse, but merely rested on the wound. The mother would not allow any treatment, and brought him to the Hospital no more.

I do not see why, under favourable circumstances, an attempt should not be made to return a small prolapse by enlarging the corneal wound, as to enable the iris to be affected by atropine. It must be remembered that many manœuvres on the eye that could not formerly be done except at a great risk, are, since the introduction of chloroform, easily and efficiently executed. I fully admit that it would require the most delicate Surgery, and that its performance is next to impossible unless the patient be chloroformed.

The very general but highly objectionable practice of touching a prolapsed bit of the iris with nitrate of silver cannot be too much condemned. It irritates the eye and adds to the degree of any existing inflammation, and, by softening the edges of the corneal wound, often increases the prolapse. In no way can it be beneficial, because it retards the healing. When the protruded portion is left alone, the base of it rapidly cicatrises with the cornea, and any free or superfluous quantity not required to repair or fill up the aperture is absorbed. It is also because of this natural, sure, and quiet process that I do not employ the scissors to cut away any part, for nothing could be gained that I am aware of, and the fear and distress on the part of the patient consequent on such an act (operation as it would be called) are well avoided.

The rules that I have already laid down for the local and general treatment of rupture or laceration of the eyeball are no less applicable here. I need add but one suggestion. It is, not to be impatient for results, and neither to over-treat, nor too readily to despair. After the regular nutrition of the cornea has been interfered with and interrupted, a very long time must elapse before repair can be well established. Time, therefore, is a most important element in these circumstances.

Wounds of the eyelids, of the surrounding integuments, and of the conjunctiva are, for the most part, detrimental, from disarrangement attending the mal-approximation of their edges, and by which there may ensue trichiasis, entropium, ectropium, with more or less injurious exposure of the eyeball, accompanied with displacement of the punctum lachrymale, or from paralysis of the upper eyelid, ptosis. The most careful adaptation of the divided surfaces is therefore of the first importance. Plaster must not always be depended on, and should be used only in very superficial injuries. With deep or extensive division of parts, whenever, indeed, the skin is cut through, sutures are absolutely needed. When, from loss of surface, the use of the needle is contra-indicated from the nature of the wound, and water-dressing, or even a poultice, is necessary, the process of cicatrisation is materially assisted by drawing together and supporting the contiguous surfaces by plaster, or bandage and compress. I have often thereby effected much in lessening deformity, and shortening the period of cure. Care should be taken that extraneous bodies are removed. Particles of grit will be best extricated by a stream of water from a strong syringe. Whether it may be advisable to pare off or remove any torn or jagged edges, and adapt the surfaces, must depend on the period at which the patient is seen; for, if more than a few hours have elapsed, and the suppuration stage has commenced, adhesion is impossible, and any interference of this kind will make matters worse. All operative proceedings must be then delayed till every trace of inflammatory action has ended. Whenever the entire thickness of the eyelid is divided, the sutures should be carried through all the textures.

Wounds of the integuments about the edge of the orbit, resulting from blows, partake of the character of incised wounds, and should be treated by suture; if primary union does not follow, the after result is none the worse for the attempt. Broad and unsightly cicatrices may sometimes be advantageously dissected out, and a palpable disfiguration exchanged for a scar very much less disfiguring, or scarcely noticeable.

A rupture of some portion of the lachrymal duct above the bony canal in which it lies is one of the accidents incidental to injury in the orbital region, and, as far as I know, produces but temporary inconvenience. If the supply of air to the cellular tissue do not soon cease, pressure should be applied over the site of injury, for the cure consists in healing the breach through which the air passes.

Laceration of the duct within the bony canal, from fracture of the bone, is the more severe accident, and it may be advisable to maintain the aperture by a style, or occasionally to pass a probe.

In surgical operations about the eyelid, the incisions should be planned with reference to the least deformity; and, where there is necessarily much loss of texture, some allowance may frequently be made for after improvement by plastic operation; the likelihood also of ptosis from injury to the levator palpebræ should be remembered.

A Surgeon may be compelled to remove parts of the eyelids, or even to perform their entire amputation, as after the bite of rabid animals. Bites about the face, or indeed any uncovered part of the body, are the more serious from the free contact of the dangerous saliva; and with this greater chance of the morbid development no well assured method of treatment should be neglected.

Wounds of the conjunctiva are of little consequence. The operation for squinting has fully established the fact that an unfavourable result is not to be feared from extensive division of this membrane, opening of the cellular sheath of the eyeball, and exposure of the sclerotica. Sutures are not required in slight injuries, although where the membrane is much or irregularly torn, and more or less detached, a considerable portion that would otherwise perish, may, I believe, be saved by them. But more than this, the healing process is thereby materially facilitated, and deformity may often be prevented. In one case I applied several, and obtained ready union.

Chemosis, or swelling of the conjunctiva, and of the subconjunctival cellular tissue from serous effusion, is a common sequence of injury to any part of the ocular appendages, and is very likely to excite alarm, but is innocuous. Existing with a copious purulent discharge, in which case the effusion is supposed to be of a fibrinous nature, danger is at hand. The extent alone need never create alarm; the brightness of the cornea, and the integrity of sight, may be taken as certain assurances of the absence of any danger. I have seen the cornea nearly covered by it, from a blow on the eyebrow, and the swelling entirely disappeared in a few days without treatment. I have never used any remedy besides a cold lotion. Different forms may be assumed, according to the amount or position of the swelling, but these are of no particular importance. I have observed very extensive chemosis, protruding from between the lids, and yet neither eyelid was everted, but the lower was so tightly pressed against the eyeball that I could not depress it. This peculiarity was evidently from the conjunctiva of the lower palpebral sinus alone being affected. A blow on the eye had produced the mischief.

Effusion of blood in the eye is not unfrequent after a blow, and must always be due to the mechanical lesion of some part, although the breach may not be apparent. The danger of its presence is in proportion to the quantity effused in the posterior parts. I have never adopted the practice of evacuating it through the cornea, even when both aqueous chambers have seemed to be quite full of it, and I have never been disappointed in seeing it absorbed.

The removal of the blood may be rapid; in twenty-four hours a small quantity has disappeared, yet weeks may be required for the accomplishment of the same process if coagulation ensues. A very much longer time is required for the absorption when the blood is effused into chambers occupied by serum, the consequence of pre-existing disease.

Any one of the many accidents that have been passed in review, from the very slightest, may be followed by inflammation of the eye, either immediately or in the course of time. That is, inflammation of the eyeball may arise, on the ready recognition of which a very great deal may be done for our patients. On this account I am induced to make some remarks on the matter.

Inflammation of the eyeball is the term often used to express a stage of inflammatory action ending in suppuration of the globe of the eye. But this is too restricted a sense of it, only a part of the meaning—that in which the symptoms are in greatest severity. It needs a far wider application, and embraces many other pathological states, some of them in the outset but slight.

I know that it is a common idea to suppose that so long as there is no "iritis" there is not much danger at hand. The incorrect term "iritis" has been a great bar to the proper understanding of this subject. There is no such disease as pure iritis. It never exists. The iris is never affected in any inflammatory manner, except as a part of general inflammation of the eyeball, and certainly never primarily affected, not even in the specific diseases of syphilitis, and rheumatism and gout. Vision is first impaired, which shows that the tissues at the back of the eye are always first influenced, or at least so far as we can appreciate the invasion of disease; and there is invariably unnatural redness of the surface of the eyeball, and enlargement of the veins returning the blood from the front of the eye, showing disturbance of the balance of the circulation within, before the iris can be said to manifest disease. In the most acute examples of so-called "iritis," the retina and the choroid suffer more from structural damage than the iris. The existence of such symptoms, whether of specific, idiopathic, or traumatic origin, are undeniable instances of inflammation of the eyeball. I believe that the only exception to this rule will be found in acute idiopathic inflammation of the retina,—a disease of very rare occurrence. Supplied by the arteria centralis retinæ, this membrane was long supposed to have no direct vascular connexion with other portions of the eyeball, until Professor Von der Kolk succeeded in demonstrating a series of very minute vessels proceeding from the corona ciliaris and connecting the retina and hyaloid membrane with the other tissues. This anatomical fact explains how retinitis, arising in the back part of the eye, has no tendency to involve the rest of the organ; whereas, when it occurs in the vicinity of the corona ciliaris—as almost always happens in traumatic cases—the inflammation becomes general.

This is some explanation of the very extensive morbid changes that may take place in the retina, and of inflammatory origin, without the iris suffering.

The points which I wish to be inferred from these remarks are that inflammation of the eyeball, like inflammation in other organs, exists in degrees, and has small beginnings; that the iris does not change its colour and undergo other phases due to its peculiar organisation till the inflammation is somewhat advanced; and that it is of paramount practical importance to recognise the commencement of the disease. I shall try to give some rules for guidance. Redness of the surface of the eye is the common external evidence of it, and that which is for the most part the first noticed, but it must not be taken alone, however intense or threatening it may seem. It must be tested and corrected by the state of vision, the most sure and certain guide, whether in connexion with any other symptom or alone. So long as the sight is clear and unaffected in any way, there can be no inflammation of the eyeball; any redness of the eye is merely on the surface, and is due perhaps entirely to the conjunctiva. Always let its integrity or impairment be taken as the condition of health or disease. For years I have satisfied myself that there is no particular arrangement of the blood-vessels that can be depended on as a proof of this or that coat of the eye being affected. It frequently happens to me to see a student separating the eyelids of a patient whose eyeball is red, suspecting "iritis," and trying to tell, according to certain theories yet taught, whether the arrangement of the blood-vessels indicates sclerotitis, and therefore the presence of the supposed disease. When I am appealed to, I say, take the state of the sight as your test, and never think of the direction of vessels. The less you know of the appearance of diseased eyes, the more will it serve you. I was called to see a nobleman whose eyes were supposed to be in great danger. When I entered the house, the Surgeon in attendance said to me, "This is a case of very severe double 'iritis.' Each sclerotic is covered with pink vessels, radiating towards the cornea, and the irides are rather dull. I saw Lord —— only this morning; I have sent him to bed, leeched him, put him on slops, and just commenced with mercury." I admitted some light into the room for my examination. The eyes were very red. I tried the state of the sight, and I found that with each eye the smallest type that is made could easily be read. In a word, vision was perfect. The case was merely one of incipient catarrhal ophthalmia.

Then there may be inflammation of the eye-ball stealing on very insidiously, accompanied at first with but slight external redness, in consequence of which I have known many blunders committed; the sight test is here, too, very valuable. Pain is the next most reliable symptom to arrest our attention, but it is secondary in diagnostic value. It never helps as far as the sight, which serves us as much in the treatment of the disease as in its recognition, for the improvement in it tells whether our remedies are potent, and when it is time to leave them off, or to lessen them. When therefore at the time of an accident, there has not been direct or immediate impairment of sight, though some mechanical lesion of the eye-ball, the first disturbance to seeing should arouse the strongest suspicions.

ORIGINAL COMMUNICATIONS.

REPORT OF AN EXPERIMENT WITH CANNABIS INDICA.

By W. WATSON CAMPBELL, MD., L.R.C.S.E.

In the *Medical Times and Gazette*, dated February 7 and June 20, 1862, two cases of tetanus are reported as having been successfully treated by cannabis indica. One case was under the care of Dr. Fraser, whose patient took, from the 3rd till the 7th January, 115 grains of the extract, the other was under the care of Dr. Parsons, who administered sixteen grains from the 12th to the 18th of April. There is, as the latter gentleman observes, a great difference in the strength of the drug as prepared in India or Britain. That which is alluded to in the following report I got from Professor Christison, and was much more powerful than any I have since tried:—

About a quarter to seven o'clock one evening in the month of February, 1862, I took about three grains of the extract in the absence of a friend with whom I was staying in Edinburgh, and whose return I did not expect for at least an hour, hoping to ascertain whether, ignorant of what I had taken, he would be able to notice anything peculiar in my appearance or conduct. My friend came home about a quarter to eight, and after waiting until five minutes past eight without any effect of the dose being manifested; I told him what I had taken, and how much, and at the same time again took a dose of the extract equal to the first, requesting him to make the most of the experiment that he could by observing the effects of the drug on my pupils, pulse, and specially in regard to its supposed anæsthetic property. At my request he then commenced reading aloud to me from a work on Surgery, and meanwhile we dismissed thought of the experiment, or rather awaited its manifestations.

At about a quarter to nine o'clock I experienced a feeling of heaviness, deep over the supra-orbital arches, and the gas-light in the room seemed less brilliant than usual, which led me to suspect that my pupils were somewhat contracted; this my friend, Dr. Lightbody, said was the case, but only to a slight extent. From this time onward I felt a gradually increasing inability to remember what was read to me,—the words just uttered and the meaning they conveyed seemed both to die away in a distance, notwithstanding that I made the most violent efforts to retain both. Strange as it may appear, at this time I could remember quite easily what was said in conversation, but what was read completely baffled me. At last I asked Dr. Lightbody so often to recommence a paragraph, so that I might recollect something of the subject about which he read, that he put aside the book, declaring it was of no use. This excited a laugh—with me, indeed, an uncalled-for burst of laughter, which was not altogether involuntary, nor yet to any considerable degree voluntary—in character it resembled singultus.

At half-past nine I tried to read aloud from a note-book, and, on stooping forward for this purpose, found that I could only see one or two words (the rest appeared a mere mass of confusion), and after uttering them consciousness left me for a few moments only, the suddenness of which, both in coming and going, resembled the *petit mal*. The note-book was put aside.

About ten we had coffee, after which Dr. Lightbody engaged in study, and left me to my own reflections. I had said to him that I would occasionally endeavour to describe my feelings and think aloud as much or as clearly as I could, in the event of any sudden or amusing train of thought occurring, so that I might afterwards be able with his help to connect the ideas which passed through my mind and the incidents with which they might have been associated. Fits of laughter recurred, and increased in frequency. I became exceedingly loquacious, and in vain endeavoured to tell Dr. Lightbody in clear and decided terms that I would not impose on his credulity—that I was not seeking to hoax him, as he evidently suspected I was doing. The most trifling circumstance sometimes suggested a train of ideas, which it was impossible for me to follow out—another train would intersect it, very different from the first, the decided foolishness of many provoking great laughter. It seems that during the time that had elapsed since taking coffee I had been disposed to humorous mischief.

At a quarter before eleven I had a peculiar feeling of duality of being—it was as if another soul occupied my body, and my own had been displaced, but still lingered near. This peculiar feeling I vainly endeavoured to describe, and, what was most tantalising, I knew that when I tried to do so I merely uttered a confusion of words, while I intended them to have both arrangement and sense. In desperation I spoke of the "Metempsychosis," and of "Wolstang," thinking that by alluding to the tale in "Blackwood," titled, "The Modern Pythagoreans," Dr. Lightbody would understand me. From this time onwards until a quarter-past eleven, I was very restless in body and mind, and indeed only had one lucid interval for a minute or two. But at a quarter-past eleven this—

"Confusion worse confounded"

left me perfectly quiet and conscious. My ears were warm and tingling, and I felt very much distressed in mind. Dr. Lightbody informed me that my appearance changed rapidly, and that a dark ring formed round my eyes. I was anxious to reach the open air, with the hope that it would prevent a return of excitement, which somewhat I dreaded. My friend prepared to accompany me, when I became very sick, and vomited. He felt my pulse, said it was very rapid, but did not count it.

Shortly after reaching the street the mental depression left, and was followed by a repetition of delirious and lucid intervals, which suddenly came on, and, after continuing for a time, as suddenly left. A slight shake by Dr. Lightbody, or a question clearly and sharply put by him, would recall me to consciousness. The mental depression during the intervals of consciousness was only equalled by the delirium, which continued to increase. We walked about for half an hour, and then called on a friend, in the hope that he might have some lemonade beside him, which might refresh me, and perhaps lessen the effect of the drug. He unfortunately had none. While in his house I had an uncontrollable fit of laughter, which was provoked by hearing him read from "Neligan" a description of that sense of duality to which I have already referred in this paper. Immediately after this I enjoyed a longer interval of quiet and consciousness than I had done for more than hour. My heart was throbbing most tumultuously, and somewhat irregularly, and there was a great feeling of warmth about the cardiac region. One of my companions at this time felt my pulse, and said it was rapid and small, but did not count it. On expressing a desire to see Professor Christison, my friends acquiesced and agreed to accompany me. I was becoming drowsy, and was somewhat afraid of coma. Two bottles of lemonade were procured for me, which served to refresh me considerably on my way to the house of Dr. Christison, at Murray-place. For a second time before arriving there I experienced the peculiar feeling of duality; lost control of my tongue; walked unsteadily; and felt that my mouth and throat were constantly dry and hot. The Professor helped to allay our (my friends included) apprehension, supplied me with a little brandy, and recommended repose. With difficulty I reached the house of my second friend, when I certainly felt much better. Consciousness was restored without any well-marked delirium interrupting it; but on counting my pulse, which had certainly fallen considerably, its rate was 120. My tongue was swollen, and notched with my teeth at the margins, and my pupils were still small. I went to bed and rested, but did not sleep until I got a cup of coffee. In the morning I partook of breakfast heartily, but during the day I had the same feeling of oppression and heaviness deep over the supra-orbital arches, to which I have alluded as about the first of the effects of the drug. The excessive loquacity to which I have also referred, and the tendency to get confused during conversation, and the recurrence of the *petit mal*, or something like it, continued for a couple of days, gradually to decrease until I was all right again.

I regretted, after all was over, that nothing had been done to test its anæsthetic property. The effects of this drug are still to a great extent undetermined, but its therapeutic properties are being appreciated in cases of tetanus, though it would be difficult, I think, to explain its mode of action in that disease, and reconcile it with the effect it had on me during the time I was under its influence. Perhaps its apparently good effects in cases of reflex excitation have merely been a *post hoc*. At all events, more certain information on its action is required than has yet been presented to the Profession.

A CASE OF POISONING BY TURBITH MINERAL.

By HENRY LOWNDES, M.R.C.S., L.S.A.

On January 30, 1863, I was sent for to see Mr. B., Great Newton-street. I found that on the previous evening before going to bed he had taken a powder consisting of a yellow substance that had been sold to him by a druggist in mistake for æthiop mineral (sulphuret of mercury), which he had been recommended by a friend to take as a remedy for scabies. He had taken the powder mixed with water, and immediately after swallowing it he felt a burning sensation in his throat. This was very soon followed by vomiting, and he sent for another druggist who lived close by, and who arrived at half-past 11 p.m. He administered the yelks of several eggs and also mustard as an emetic. In the night the vomiting continued, and the patient was also much griped and purged, and got no sleep. I found him at 9 a.m. suffering a good deal from cramps in the legs, still rather purged, and still occasionally vomiting. He complained of pain in the epigastrium and in the throat. The fauces were rather inflamed, and the tongue was tinged down the middle with a greenish yellow colour, evidently produced by the powder. The pulse was regular, but small and weak. I gave him a grain of opium every three hours, and directed him to have plenty of thick barley water to drink, and no other nourishment, and hot flannels to the epigastrium.

6 p.m.—He is better. There is still some pain about the stomach, but no tenderness on pressure. He has only vomited once since morning. The purging has ceased, but there is a good deal of tenesmus. To take the pills every four hours.

31st, 11 a.m.—He is much better; has had a good night; has not vomited; has strained a good deal at stool, but passed nothing; the gums are beginning to be sore. ℞ Ol. ricini, ℥j.; mucil. acac., ℥ss.; tinct. opii., ʒj.; aq. menth. pip., ad. ℥viii.; m. sum., ℥ss, quater in die.

Next day he was much better in every way. Slight salivation came on, but in three or four days he was able to return to his occupation.

I had attended this patient before; he was a thin man, but of good general health and temperate habits, aged about 28. Four powders had been sent him by the druggist, and the wrapper containing them was labelled "Ethiops Mineral." The three remaining powders I found weighed each rather less than one drachm. They were of a bright yellow colour, and when tested proved to be the subsulphate of mercury, or turbith mineral. The spoon used in taking the powder was coated with a thin film of mercury.

Taylor mentions the case of a boy, sixteen years old, who was killed by a powder containing a drachm of this substance.

This case is another illustration of the carelessness with which poisons are sold, and we also see one druggist very actively administering antidotes that he might screen his offending brother.

The latter averted law proceedings by making a small compensation to the patient for his sufferings and loss of time.

Liverpool, August 12.

A GERMAN journal furnishes the following enumeration of European Lunatic Asylums, without, however, stating the sources of information:—Belgium possesses 51, Denmark 10, Germany 157, France 110, Greece 3, Great Britain 81, Italy 33, the Netherlands 17, Portugal 4, Russia 74, Scandinavia 17, Switzerland 42, Spain 7, and Turkey 2, making a total of 608.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASES OF BASTARD VACCINIA (?)—CLINICAL REMARKS.

(Under the care of Dr. HARLEY.)

Case 1.—Arthur C., aged 2 years and 3 months, came under Dr. Harley's care on February 9, 1863, with his face and neck covered with a number of vesicles which at the first glance appeared exactly like vaccination vesicles, and, had there been only one or two instead of twenty or thirty, the deception would have been complete. Before further describing the case we shall give its history, according, at least, to the mother's account of it. The little boy, who was a well-developed child for his age, had always enjoyed good health; he never had either measles, whooping-cough, or scarlet fever. His father and mother, aged respectively 27 and 23, have both good health; there is no hereditary or acquired taint in either of syphilis, struma, or consumption, and neither of them have any relations who have suffered from phthisis. They have another child four years old, who enjoys perfectly good health, so the child cannot be said to spring from a delicate stock. He was vaccinated on the left arm on January 9, exactly a month previously, and three days after being vaccinated several spots appeared behind his left ear, and in a few days more spots appeared upon his face; the vaccination at the same time apparently took well.

The patient's present condition (February 9) is as follows:—Behind the left ear there is a large sore caused by the coalescence of the vesicles, and round its lower margin the discharge has dried, and formed a thick yellowish scab. On the left arm are three large ecthymatous-looking spots, with red bases, and covered with dense yellow crusts. These are the original vaccination vesicles. There are two smaller vesicles in a less advanced stage on the tip of the shoulder, and on the neck are several having the exact appearance of vaccine vesicles on the eighth day. In some the pit in the centre is quite visible, in others not so well marked. On the head there are a few vesicles, and on the face about twenty, with all the appearances presented by the true vaccine vesicle from its earliest to its latest stage. At one time there were so many on the eyelids that the child could not open his eyes. The child is feverish and thirsty; has no appetite; the tongue is furred, but the bowels are open. The mother states that the child from whom the vaccine lymph came seemed perfectly healthy, but that her own child has never been well since.

12th.—The patient is much the same as at last report, except that the vesicles are in a more advanced stage of maturity. There is a well-marked fresh vesicle on the right arm. Zinc ointment was now ordered to be applied to the scabs, and the child was to take three grains of grey powder every alternate night.

19th.—The child is much less feverish, and very few new spots are coming out, a couple have, however, appeared on the right hand, and these, the mother thinks, he got from rubbing his face with the hand. The mother has also inoculated herself on the lower lip from kissing her child. To continue treatment, at the same time the child is to have nourishing diet.

We need not continue our report of the case, as from this date the child rapidly got well, and in a month the spots were almost entirely gone.

Case 2.—William E., aged 8 months, was brought to the Hospital on April 28, with an eruption on the face, precisely similar to the one just described. The mother stated that the child had always been healthy until it had been vaccinated three weeks previously. The arm, however, took well,—so well that a lady's baby was vaccinated from it. The eruption on the face first appeared a few days ago. The child is slightly feverish. A drachm of the Hospital saline mixture was ordered to be taken thrice a-day, and Dr. Harley inoculated the right arm with a little of the lymph from one of the vesicles on the face.

May 1.—The face is now covered with about twenty vesicles, closely resembling vaccinated spots. There is only one vesicle on the left ear, and none on the head. At the place on the arm where the matter was introduced with the lancet there is a large vesicle, exactly like a vaccine one, except that it is more advanced, it being already somewhat purulent, and this only the fourth day. Repeat the medicine.

5th.—A number of fresh spots have appeared on the face, and there are a few scattered ones on the head. The patient is otherwise much better.

12th.—The vesicles are now all encrusted. Many of those that first came out are quite well, and have only left a red mark.

19th.—The eruption has disappeared, but the face has still a spotted appearance.

In the following case the disease did not immediately follow upon vaccination, but appears rather to have resulted from contagion :—

Case 3.—Edwin H., aged one year, was brought to Dr. Harley on August 7, suffering from an eruption similar to those already described, and occupying very much the same situations. There are fifteen vesicles on the left side of the face and chin, two or three of which came out to-day; the others appeared yesterday. The child was vaccinated when three months old, and has always enjoyed good health until now. The mother thinks that the boy has been infected by a person living in the same court, who has what she describes as a similar eruption on the face. Dr. Harley again tried the effect of inoculation. From one of the vesicles on the face a little serum was taken, and inserted under the skin of the right arm by means of the lancet's point. The child's health is very little disturbed in this case. The skin is not so hot as it was in the others, and the tongue is but very slightly furred. To take half a drachm of the Hospital saline mixture thrice a day.

August 11.—At the inoculated spot there is a well-formed vesicle on a red and inflamed base, with a depression in the centre. The mother says it appeared the next day after her visit to the Hospital. The vesicles on the face are now covered with scabs, in the centre of which are well-marked cup-like depressions. Their bases are red. To continue mixture, and use zinc ointment at bedtime.

14th.—Face and arm much better. The child has, however, got one fresh spot on the back of its right hand, and the mother has a similar one on her cheek, which she thinks she got by caressing the child after he had fallen and hurt himself.

This case is still under observation.

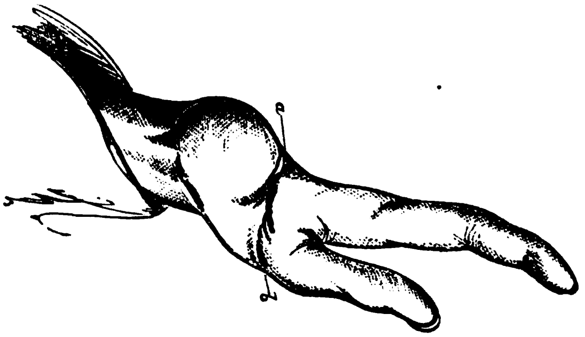
Clinical Remarks by Dr. Harley.—Here we have three cases running much the same course. Two appear almost to be the direct result of vaccination, one the effect of contagion. The serum of all has been proved not only to be able to extend the disease in the same organism, but even to propagate it to another. What can the nature of the virus be? It is now very generally admitted that the germs of disease other than mere vaccinia may be communicated from individual to individual by means of the vaccinator's lancet; but regarding the number and nature of the diseases which may be so propagated, we have still much to learn. Although we are already tolerably familiar with the various forms of exanthematous and other eruptions which affect the human system, and are able to recognise them by name, and give a tolerable guess at their course and termination, yet we every now and then meet with cases, the origin of which is doubtful, the course unusual, and the termination unexpected, and it is with the view of throwing some light upon these that I have called your attention specially to the foregoing. You are not to suppose that the form of affection which has been described is rare; on the contrary, it is common enough; and most people would no doubt say that it is ordinary porrigo. Porrigo, however, is a generic term, and not a special disease; we had formerly porrigo favosa, and porrigo scutulata, both of which have been re-christened, and now appear under the names of tinea favosa and tinea tonsurans, to neither of which affections can this disease, which we have called "bastard vaccinia," for want of a better name, be said to belong. For beyond its vesicular appearance and highly contagious (or we might rather have said inoculable) character, it bears no resemblance whatever to them. Moreover, it is accompanied by slight febrile symptoms, which would almost of themselves be sufficient to prevent its occupying the same group.

THE LONDON HOSPITAL.

CASE ILLUSTRATING THE EFFECTS OF NERVE SECTION ON ANIMAL HEAT.

(Under the care of Mr. HUTCHINSON.)

George K. S., aged 48, was admitted in December, 1862, in consequence of a recent accident, but the chief interest of his case belongs to a former injury. Two years ago, Mr. Luke amputated the little, ring, and middle fingers of his right hand. The injury had been caused by a circular saw, which had passed deeply in the palm on a level with annular ligament, almost to the metacarpal bone of thumb. The metacarpal bones of the three fingers mentioned were all removed at their carpal joints.



When he came before me in the out-patients' room for another injury, I congratulated him on having saved a useful finger and thumb. He replied that the fore-finger was no use to him, inasmuch as he could not feel in it. He "could put it in the fire without feeling." I then noticed that its skin, below the second joint especially, looked too smooth and shiny, and on touching it found that it was much colder than the thumb. He complained very much of its aching and coldness. It had never inflamed. The small muscles on the outer side of the thumb were wasted, but its adductor and the abductor of the index finger were in good case. The parts were soundly healed, and the scar across the palm would not have been noticed without looking for; it was, however, very deeply attached. The long flexor tendons were free, and he could bend the thumb well, and the finger to a moderate extent. On careful trials with the thermometer, I found the temperature of the pulp of the finger ten degrees lower than that of the thumb. This observation I confirmed by repeated trials (76 and 86). With regard to the influence upon the nutrition of the finger at the time, the man told me that he was long under care for "swelling and blistering of the whole finger." The thumb did not inflame.

On careful examination of sensation, I found that he could feel on the back of the finger up to, and a little beyond, the joint between first and second phalanx (radial nerve). In all other parts he had no feeling whatever.

METROPOLITAN FREE HOSPITAL.

TRACHEAL ABSCESS IN THE NECK, WITH PHTHISIS AND LARYNGEAL DISEASE.

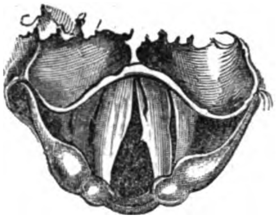
(Under the care of Mr. HUTCHINSON.)

John P., aged 35, having the aspect of advanced phthisis, came under my care on account of an abscess exactly in front of the trachea, and midway between the larynx and sternum. The trachea itself seemed thickened on each side at this part. The abscess did not contain air, but it exactly resembled in position and general appearance one which I recollect to have seen some years ago, in which there proved to be a free communication with the trachea. It was not in the position of any glands, being exactly in the middle line, and over the most superficial part of the air tube. Although no air was contained, I still think it most probable that it was connected with tuberculous ulceration of the trachea.

The man's history was that of phthisis extending over three years. On and off he had suffered from laryngeal attacks for two years, and during the last three months had never been able to speak above a hoarse whisper.

The diagnosis of ulceration of the mucous membrane was confirmed by laryngoscopic examination. The latter was undertaken at the Dispensary for Diseases of the Throat by my friend Dr. Morell Mackenzie, who was kind enough to send me the following report and sketch of the condition of the parts. My impression is strong that we do every now and then meet with cases of abscesses in the neck close to the trachea, which have the same relation to tubercular ulceration within the tube which abscesses by the anus often have to a similar disease of the rectum. We must not expect in these cases that air should always escape, any more than that fæces should always flow by a fistula in ano.

Dr. Mackenzie's Report.—On examining this patient with the laryngoscope, the vocal cords were seen to be of a uniform bright red colour, and greatly swollen anteriorly. The anterior half of the patient's left vocal cord was at least twice as broad as in the normal state, and situated on this vocal cord was a peculiar dark purple mark (looking like a partially healed wound), extending from the free border, near the anterior insertion, obliquely across the vocal cord. The hyperæmia around this mark was of a much deeper colour than the rest of the congested mucous membrane. The anterior half of the right vocal cord was also much swollen, but less so than its fellow. The surface of the vocal cords was not all rough, except in the immediate neighbourhood of the mark (already referred to); the edge of the right vocal cord was, however, uneven. The swelling of the cords is well shown in the annexed woodcut, and the hypertrophy anteriorly is the more remarkable when it is remembered that the cords generally appear (in the laryngeal mirror) to be broader behind than before.



GUY'S HOSPITAL.

ANEURISM OF THE ASCENDING AORTA—RUPTURE INTO THE RIGHT PLEURA—PRESSURE ON THE RIGHT BRONCHUS—PULSATING TUMOUR AT THE SECOND AND THIRD COSTAL CARTILAGES ON THE RIGHT SIDE—SLIGHT CONTRACTION OF THE RIGHT PUPIL.

(Under the care of Dr. HABERSHON.)

(Reported by Mr. PHILLIPS.)

HENRY H., aged 49, a waterman and lighterman, residing at Bermondsey, was admitted into the Clinical Ward, under the care of Dr. Habershon, on April 29, 1863.

He stated that he had always been a healthy man until about twelve months ago, when he had a severe bronchitic attack, and that he had suffered from cough and expectoration ever since. He had been accustomed to lift heavy weights, and he had rowed many wagers on the river. His illness compelled him to give up work twelve months ago, and six months later he noticed a slight swelling on the right side of the sternum; it was very small at first, but rapidly increased in size; during this time severe cough troubled him, with copious frothy expectoration, sometimes streaked with blood; he had also had considerable pain between the shoulders.

On Admission.—He was a tolerably well-nourished man, with light-brown hair, and an anxious expression of countenance. He could sit up in bed or lie down without much distress. His voice was hoarse, and his cough stridulous; the latter was very troublesome, and the expectoration, which was abundant, was frothy, and streaked with a considerable quantity of blood. On the right side of the chest, between the second and third ribs, at a distance of one inch and a-half from the border of the sternum, was a swelling about an inch and a-half in diameter, which could be seen to pulsate; the swelling was soft, but the skin over it was not discoloured. On applying the stethoscope, a slight whiz could be heard over the tumour, and a bellows murmur accompanied the first sound of the heart over the aortic valves. This murmur was heard from the third costal cartilage to the sterno-clavicular articulation on the right side. The cardiac dulness was normal, but there was imperfect resonance at the right apex. The respiratory murmur was feeble on both sides, and accompanied with a stridulous sound. Resonance was imperfect at both bases posteriorly, and accompanied with crepitation. There was not much difference in force in the two radials; the right seemed slightly feebler—80 per minute. The right pupil was slightly contracted. He complained of dyspnœa, but had no dysphagia.

May 1.—Tinct. digitalis, ♏v.; acidi sulph. dil., ♏x.; tinct. hyoscyami, ♏xx.; syrupi, ʒj., ex. aquâ ter die haustus sumendus. His diet to consist of chop, vegetables, milk.

4th.—Does not feel so well. He does not complain of any pain around the chest, but there is a slight tenderness over the region of the swelling. He suffers from severe dyspnœa on lying upon his back, or sitting up, principally in the former position; he only feels easy when lying upon his left side. The cough is harsh and stridulous, and the expectoration considerable, but there is to-day no blood mixed with it. The pulse is feeble—79 per minute.

5th.—Has passed a good night. Complains of soreness around the swelling. The superficial veins of the neck on the right side are distended. Pulse 88 per minute, regular, feeble. The dyspnœa is not quite so distressing. Emplastrum belladonnæ parti dolenti applicandum. Repetatur Mistura.

8th.—Appears better. Is up walking about the ward, but while doing so seems to be in pain, and keeps his body bent down considerably. The cough is less, also the dyspnœa, and the expectoration is not so copious. He has passed a good night.

9th.—The belladonna plaster is to be removed, as it seems only to irritate. ℞ Pil. Conii c. Ipecac. gr. v., omni nocte.

11th.—Does not feel quite so well. His cough does not trouble him much at night, and he sleeps well. The expectoration does not diminish in quantity. There is a loud systolic bruit heard over the base of the heart, and also very plainly when the stethoscope is applied at the swelling. There is a rhonchus to be heard at the posterior part of the lung on each side. Mucous râles over the front of chest. Tongue pale and slightly furred. Bowels relaxed. Pulse regular, small, 79 per minute.

15th.—Dyspnœa not so troublesome. Expectoration copious. Complains of a lancinating pain over the swelling. The latter does not seem to increase in size. (The patient thinks that it is smaller.) Cough worse in the day time, but not very troublesome, unless he lies on his back. Mucous râles are heard very distinctly over the front of the chest.

19th.—Has had a very bad night. Pain over the aneurism and between the shoulders, but he is better this morning. Expectoration increasing. Bowels regular. Pulse 86 per minute.

22nd.—Ice was ordered to be applied to the painful part, but he could not bear it. He feels a sharp pain beneath the sternum when he draws his breath, and he says the pain makes him retch and feel sick at times. Expectoration not so copious, mixed with blood. There is pain in the right axilla, and down the right arm. He loses his breath directly he lies on his back. The bowels are regular. Tongue clean. Pulse 94, feeble. Respirations 21 per minute. The swelling is about the same size; the skin over it is movable. Rhonchi can be very plainly heard over the larger tubes, but the mucous râles are not so distinct. He seems comfortable when lying on his left side.

25th.—Tincture of aconite to be daily painted around the swelling.

28th.—Continues much the same; has experienced considerable relief from the aconite, which is therefore to be continued. There is partial tubular breathing posteriorly on both sides, the force of respiratory murmur is equal on the two sides; and the sound emitted on percussion is not so resonant as in health. Pulse 80, feeble, but with no perceptible difference in the two radials. The size of the two pupils is the same. The stridulous cough continues, but the expectoration is not nearly so abundant; it is muco-purulent. ℞ Acidi hydrocy. dil., ♏iij. ex Mist. Conii ℥j. (G.P.) ter die.

June 2.—Says he rests well at night, but complains of considerable pain in the right side of chest, which, however, is partially and temporarily relieved by the aconite. The systolic murmur is most distinct over the swelling, and becomes gradually more indistinct the further from the aneurism the stethoscope is removed. It is not harsh.

5th.—The aconite seems to act very effectually in relieving the pain. There is slight dulness posteriorly on both sides, Tubular breathing most marked on the right side. Tongue clean; appetite good; bowels regular.

9th.—Feels a little better, his cough not being so troublesome. The pain continues to be relieved by the outward application of the tincture of aconite, which is painted on daily. On the left side posteriorly there is rhonchus and bronchophony. On the right side there is marked tubular breathing, and some mucous rattles. ℞ Pulveris Doveri, gr. v., omni nocte sum.

13th.—The cough is troublesome, and the expectoration very considerable, and muco-purulent, otherwise he is pretty comfortable. He rests well at night.

The patient remained without any marked change till the 23rd of June. Up to this time he had taken the conium medicine, and had the aconite painted on daily. Copious muco-purulent expectoration still persisted.

On the 23rd he brought up a small quantity of blood, yet he had a comfortable night, but at 6.30 a.m. on the 24th, while sitting in bed, he fell back, and was found dead.

Autopsy Thirty-two hours post mortem.—Dr. Wilks' report runs thus:—The front part of the aneurism was formed by the sternum, so that on removing the sternum the front wall of aneurism was cut off; the bone was slightly eroded, as were the origins of the upper ribs on the right side. The aneurismal sac was closely adherent to the right lung, and near their junction above, a rent had taken place, through which blood had escaped into the chest, which was filled with several pounds of clot and serum; the lung itself collapsed. The left lung was much condensed at its base or indurated with inflammatory product. It was very tough, white, and dense—quite airless; in its midst were several dilated tubes filled with a purulent mucus. It was closely adherent to the diaphragm, and the part had been formerly the subject of pleuro-pneumonia. The valves and lining membrane of heart were healthy. A large aneurism was formed at the front of the ascending aorta by a longitudinal opening nearly two inches long. The tumour bulged forwards to the sternum, and on each side, especially the right, forming a large sac the size of the fist; the walls of this were thin in parts and covered with fibrin, especially on the right side where in contact with the lung. On this side the right bronchus was much flattened, so that the finger could just be passed into it. The aneurism reached as high as the arch and below to the heart, where in one spot it was so thin that a rupture into the pericardium would soon have occurred. The aorta was tolerably healthy.

Clinical Remarks by Dr. Habershon.—The diagnosis in this case was clear, and the cause of the disease could be traced to excessive muscular exertion. Several of the symptoms presented points of interest:—1st. As to the signs of bronchitis; these preceded the indications of aneurismal tumour, and it seemed probable that they were not altogether due to the aneurism. The rhonchus and mucous râles were general, and there was muco-purulent expectoration, mixed occasionally with blood. Interference with the nervous supply of the lungs, with the return of blood, and pressure on the bronchi would each induce congestion and mucous effusion. After death it was found that although the aneurism had compressed the right bronchus, the left lung was condensed, infiltrated with inflammatory product, and several of the bronchial tubes were much dilated. If the left bronchus had been compressed, it might have been supposed that the left lung had become collapsed, and afterwards affected with pneumonic change, but there was no evidence of such pressure; it was the right bronchus thus affected, and an antecedent affection of the left lung was regarded as probable; there was persistent bronchial disease, with spasmodic aggravations. Dr. W. Gairdner, in his "Clininal Medicine," p. 477, records an exceedingly interesting case of aneurismal pressure on the bronchus being followed by contraction of the lung. 2ndly. As to the hoarseness and stridulous cough; here, also, there was doubt whether direct pressure upon the bronchus was the cause, or whether the recurrent laryngeal nerve was also implicated. The right bronchus was so compressed as to resemble a mere fissure, and this would doubtless account for the stridor, but the hoarseness was probably laryngeal. The great feebleness of the respiration on the left side as well as on the right was explained by the existence of disease on that side. 3rdly. The hæmorrhage from the lungs I had referred to bronchial congestion from pressure, from the manner in which the blood was incorporated with the sputum, but sometimes it was in streaks, and even in separate portions. The blood had been noticed before admission on April 29, it ceased on May 4, was again observed on the 22nd, and lastly on the day preceding the fatal rupture. Some valuable observations on repeated oozing into the bronchus from an aneurismal tumour are made by the author just mentioned. 4thly. The right pupil was on admission smaller than the left, but on May 28, one month after admission, the pupils were of the same size. The right pulse was rather feebler for a time than the left, but there was very little interference with either the subclavian or the carotids, and we believe this transient change in the pupil arose from pressure on the sympathetic nerve of the affected side. 5thly. The tumour did not exert much pressure on the brachial plexus, and the pain down the arm was but little complained of, neither did the tumour extend into the neck. The position of greatest ease was leaning forward, and towards the left side; that position in which the pressure was in the greatest degree removed from the trachea and large vessels. 6thly. The aneurism at the anterior part of the ascending aorta, and the false sac contained but little fibrin; and although nearly through the skin, and a rupture into the pericardium must soon have occurred, the rupture actually took place into the right pleura, filling it with blood, and compressing the lung. 7thly. As to the treatment, the spasmodic dyspnœa and paroxysmal cough were greatly relieved by conium and hydrocyanic acid. Opium and morphia always produced headache and distress; the rest and regulated diet which were enjoined had, doubtless, some effect on his symptoms. The local pain was greatly mitigated by the application of the tincture of aconite. At first belladonna was applied, but the plaster produced a painful sense of constriction, and it was removed. A bag of ice was afterwards tried, but the patient could not bear it. Two days before his death the patient was so much relieved as to suppose that he was getting well, and was about to make arrangements for going home. Slight increase of muscular exertion probably led to the fatal extension of the disease.

SEAMEN'S HOSPITAL, "DREADNOUGHT."

CASES OF ANEURISM.

[Communicated by Dr. Ward.]

The following cases of aneurism constitute an important addition to those already reported in the numbers of this Journal for November 30, 1861, and September 27, 1862, as having occurred under the care of Dr. Ward at the above Hospital, and also at the City of London Hospital for Diseases of the Chest.

The characteristic symptoms of aneurisms of the thoracic aorta were pointed out on the occasions alluded to, and it is therefore now unnecessary to do more than glance at the peculiar features of each of the ensuing cases.

In the first case, a large aneurismal sac existed in the thoracic aorta after the giving off of the large vessels, which could not be detected by any of the usual physical signs, and which gave rise to no other functional derangement than severe paroxysms of angina pectoris. The site of this aneurism is opposed to the statement made by Dr. Gairdner in one of his admirable clinical papers, that angina pectoris is almost confined to aneurisms of the ascending aorta. It is remarkable that, so far as observation could determine during the short period the man lived after his admission, and from the account he gave of his previous history, there was not any discharge of blood, or bloody expectoration prior to the fatal hæmorrhage. In the second case, also, death took place by hæmorrhage, of which there were but two attacks. The prominent functional symptom was paroxysmal dyspnœa, due evidently to irritation of the laryngeal nerve. The third case shows how the symptoms of aneurism will necessarily vary with its site. Here pressure of the tumour upon the colon produced intestinal obstruction, extending over a considerable period on two occasions, and bidding fair to ensure death from this cause, when fatal internal hæmorrhage occurred from rupture of the sac.

Case 1.—Aneurism of Thoracic Aorta—Paroxysms of Angina Pectoris—Death from Hæmorrhage.

[Reported by Mr. Leach.]

History.—Daniel T., aged 42, admitted July 10, 1863. The history of this case is singularly scanty and unsatisfactory, although the patient was far more clear and intelligent than many of his class. His last passage was from Calcutta, up to which time he persistently declared that his health had been excellent, that he had never suffered from rheumatism or rheumatic fever, nor did he remember ever to have sustained any kind of injury. Spasmodic pains about the heart commenced twelve weeks ago, but he continued to work until within fourteen days of admission here.

Symptoms on Admission.—Aspect healthy and robust; complains of wandering pains about the præcordial region, extending to the left shoulder; no cough or expectoration; a careful auscultatory examination detected an occasional irregularity in the heart's action, but no bruit or other abnormal sound, anteriorly or posteriorly. Pulse 90, feeble; both pulses alike. The bowels are regular, and sleep is tolerably constant; the urine is free of albumen, and has an abundance of chlorides. Slop diet was ordered, with the following mixture:—Tr. opii, ♏v.; sp. æth. comp., ʒj.; to be given three times a day.

12th.—Has slept tolerably well since admission; complains of less pain, and wishes to get up; there is no change in the auscultatory signs. To have ordinary diet, and get up for two or three hours daily.

17th.—The pain still continues, and is now paroxysmal; no change is discovered by a careful use of the stethoscope every other day.

18th.—This morning, during the visit of the Medical officer, and at the time that he was endeavouring to elucidate more particulars as to history from the patient, a most profuse hæmorrhage from the mouth and nose took place, of arterial blood mingled with frothy mucus, which terminated the case fatally in less than three minutes; pulsation at the wrist ceased before the last two or three inspirations.

Post-mortem Forty-eight Hours after Death.—Slight rigor mortis. The brain was not examined. Thorax—Right lung, the upper and middle lobes were healthy, but the lower lobe throughout gave clear indications of pulmonary apoplexy. Left lung appeared healthy on its anterior aspect, and there were no pleuritic adhesions. In process of removal it was found very much engorged; and, where the descending aorta and lung lie in juxtaposition, an adhesion of small area but very strong was found; it was torn across, was about the size of a shilling, and communicated directly with the aorta; all the bronchi and tubules around this adhesion were filled with partially coagulated blood. Heart—The heart was removed from above downwards, so as to include the aorta, œsophagus, and trachea. The aorta was found strongly adherent to the bodies of the fourth and fifth dorsal vertebræ, and a large opening, about the size of half-a-crown, and corresponding to the area of the adhesion, was made in it during removal. The valves of the heart and ventricles were healthy; the ascending and half the transverse aorta were healthy; a large aneurismal sac was found at the junction of the transverse with the descending aorta, situated, with respect to the aorta, somewhat posteriorly; there were two openings in the sac; one, the larger, corresponding with its adhesion to the spinal column; the other, the smaller, corresponding with the pulmonary adhesion, and from which the fatal hæmorrhage proceeded. The spine was examined and superficial caries found of the bodies of the fourth and fifth dorsal vertebra, the area of disease being greatest towards the left side.

This aneurism is preserved in the museum of the *Dreadnought*.

Case 2.—Aneurism of Thoracic Aorta—Pulsating Tumour to Right of Sternum—Paroxysmal Dyspnœa—Death by Hæmorrhage.

[Reported by Mr. Leach.]

History.—William T., aged 40, admitted June 26, 1863. Sailed last to Shanghai and back. Eight years ago he fell down the main hatchway of a ship, striking the chest violently, was then confined to his hammock for some days, and has ever since felt more or less uneasiness about the sternum, with occasional spasmodic attacks of pain. These symptoms increased during the time that he was in China, and about seven months ago he first perceived a small swelling to the right and near to the upper third of the sternum; he was unable to work during the passage home, and the tumour has been gradually increasing. Has always been a hard drinker.

Symptoms on Admission.—He was hoisted to the deck in a very exhausted state, and suffering from a severe attack of dyspnœa. On examination of the chest, a large pulsating tumour, about the size of a hen's egg, was seen to the right side of the sternum, and corresponding to the situation of the transverse aorta. No bruit was heard either near the tumour or over the base of the heart. The right pulse was found to be stronger than the left, and gave 100 beats in the minute. The left lung gave no respiratory sounds on auscultation, and puerile respiration was heard over the right lung behind. He had a slight cough, with scanty mucous expectoration. The bowels were regular and the appetite good. He was ordered a diet of eggs, milk, and beef-tea, a hot fomentation to be applied to the chest, and the following mixture to be taken three times a-day:—Sp. ammon. co., ♏xii.; sp. æther s. co., ♏x.; mist. camph. ad., ℥j.

27th.—Rest and quiet have greatly abated the urgent symptoms, but he has at intervals severe paroxysms of dyspnœa, and scarcely sleeps at all.

28th.—During the morning of this day he appeared much better, and his expression was much less anxious. A common injection was ordered, and the bowels acted freely. At 8 p.m. the Medical officer on duty was called, and found him expectorating arterial blood very profusely. The quantity discharged amounted to about a quart. By strict quiet around and the constant use of ice and iced drinks the hæmorrhage was arrested. He slept afterwards interruptedly for several hours.

29th.—Died this morning after a sudden accession of hæmorrhage from the mouth.

Post-mortem Forty-eight Hours after Death.—Slight rigor mortis. The head was not examined. Thorax—In removing the anterior bony covering of the chest very strong adhesions were found under the sternum corresponding to the seat of the tumour; the viscera below were separated with some difficulty. Right lung healthy; a few slight pleuritic adhesions. Left lung hepatized as to its lower half. Heart—The pericardium was opened from below upwards, and contained about two ounces of fluid. On dissecting upwards a tolerably large aneurismal sac was found directly over the transverse aorta. The inner and middle coats of the ascending aorta were extensively diseased, and, in many places, completely disorganised. On tracing the aorta upwards, an opening, about the size of a horse-bean, was found posteriorly, which opening communicated with the left bronchus about the eighth of an inch below the bifurcation; the coats of the descending aorta were healthy throughout. The aortal valves were healthy, and the walls of the left ventricle were a little hypertrophied. All the abdominal viscera were healthy. This aneurism is preserved in the museum of the *Dreadnought*.

Case 3.—Aneurism of Abdominal Aorta—Intestinal Obstruction—Death by Hæmorrhage.

[Reported by Mr. Leach.]

History.—William W., aged 23, a tall, muscular man, of African descent, but born at Bermuda, admitted April 9, 1863. Previous health very good in every respect.

Symptoms on Admission.—He was admitted suffering from rheumatic pain in the limbs, of a subacute character, which commenced fourteen days ago. Bowels relieved the day previous to his admission. No abnormal heart sounds. He was ordered a mixture of potash and hyoscyamus, and placed upon slop diet.

10th.—A draught of aperient medicine was given to-day in the ordinary course; no action of the bowels took place, and on the following afternoon he was ordered half a drop of croton oil in sugar.

12th.—No action of the bowels has taken place, this being the fourth day of constipation. He now complains of great abdominal pain and feeling of tension; on examination, a defined mass is felt through the abdominal walls, corresponding in size and direction to the ascending colon; along this tumour the pain appears to be greatest; there is no apparent hepatic enlargement, and no tympanitis. He still has wandering pains in the limbs, and has had very little sleep. The pulse is small; the tongue moist, and very much furred, but no anxiety of expression. Half a grain of morphia was given at once, and a simple saline mixture prescribed. A large linseed cataplasm was ordered to be applied to the abdomen, and a simple enema to be given in the afternoon. 11.30 p.m.—There is much less pain, and he has slept for two or three hours.

13th.—No relief from the bowels, or perceptible alteration of any symptom. The injection to be repeated, and a grain of opium to be given twice a-day.

15th.—There is less abdominal hardness and tenderness;

the tongue is still much furred, but the patient takes slop diet, and sleeps at intervals; the injections are given every other day, and the opium continued.

16th.—No stool. Three drachms of the oil of turpentine were added to the injection to-day; this brought away a small amount of fluid fæces, but no scybala therein.

18th.—Another scanty fluid stool was passed, but there is no change in the general symptoms.

20th.—The turpentine enema is ordered to be given every day, and a grain of opium once a-day only.

22nd.—On this day a copious motion was passed, consisting of many small and very hard scybalous masses; this gave great relief, it being the only healthy action of the bowels during the last thirteen days.

24th.—A simple injection is still given daily, as the bowels are very inactive; the opium is omitted, and other treatment continued as before.

28th.—He gets up regularly, has no abdominal pain, and sleeps well; the bowels act once a-day, and the tongue is nearly clean. He was placed on fish diet, and will probably leave the Hospital at the end of the week.

Four days after the last note the symptoms of obstruction recurred with very great severity. A further minute examination detected a small pulsating tumour a little above the umbilicus and close to the edge of the left rectus muscle; the course of the ascending and transverse colon was clearly defined, and the intestine appeared to be filled with hardened fæces. Pain was now constant, and relieved only by frequent doses of opium. Severe paroxysms occurred occasionally—always referred to the left hypochondrium. An attempt was once made to use the O'Beirne tube, but without success, and the treatment was wholly confined to the administration of simple enemas occasionally, relieving pain by opiates and the general use of stimulants. The pulsating tumour became larger, but still very clearly defined, and an occasional bruit was heard over it. The patient continued in the same state for upwards of three weeks after the relapse, and died suddenly in a paroxysm of pain on June 1. A post-mortem examination was made twenty-six hours after death, and the following notes are the result thereof.

Rigor Mortis.—The head was not examined. Thorax.—Lungs, a few slight pleuritic adhesions; heart healthy. Abdomen.—Liver small, structure healthy; spleen very small; right kidney, a small cyst found therein; left ditto, healthy. About a pint of serous fluid found in the abdominal cavity; the parts as seen *in sitû* on the left side presented the following appearances:—The descending colon was very much contracted, and filled with scybalous masses; it rested on, and in most places was firmly attached by its under surface to, a large sanguineous clot, which clot appeared to occupy the left side of the abdomen from the lower edge of the stomach to the upper edge of the iliac fossa, the ascending and transvarse colon were also contracted, and filled with hardened fæces. On removing the mesentery and part of the alimentary canal, the most prominent and depending portion of the aneurism was seen just above the site of bifurcation of the abdominal aorta. The clot, including the abdominal aorta, iliac arteries, and left kidney, was removed *en masse*, the whole weighing 3 lbs. 11 oz. The clot was washed away, and the imbedded kidney removed. The sac of the aneurism was found at the lower end of the aorta, inclining to the left side, both the iliac arteries opening into it. The rupture was found in the upper and posterior part of the sac, the opening being about the size of a threepenny-piece. The vertebræ were unaffected.

DEODORIZATION OF SEWAGE.—The Town Council of Leeds, alarmed by the terrible and increasing rate of mortality —42 per 1000 this year—in some parts of the borough, parts abounding in open privies and middens, have determined on giving an extensive trial to a process which promises to render all the sewage innocuous, and at the same time to utilise it as manure. Dr. Bishop, of Leeds, has discovered "a deodorising powder," by the daily application of which privies can be kept perfectly sweet—enabling their contents to be removed without tainting the air, and leaving them profitably saleable as manure. The Town Council, after cautiously and carefully watching trials of the process, have delivered over to him two of the worst districts of the borough. The failure or success of the system, which will thus be tested on a large scale, is a matter of public interest.

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Medical Times and Gazette.

SATURDAY, AUGUST 22.

BRITISH MEDICAL ASSOCIATION.

THE reports which appeared in the last two numbers of this Journal, will, we hope, have enabled our readers to appreciate a fact obvious to all who were present at the recent meeting. There can be no doubt that it was exceptionally successful, both in a social and Professional point of view. Not only was the concourse of members unusually large, and gathered together from an extensive area, but the intellectual feast to which they were invited far exceeded the generality of such entertainments in scientific and literary character.

We were enabled to bring before the public a concise analysis of Dr. Symonds's opening address within forty-eight hours of its delivery; but it was not then in our power to express in any but a cursory manner an adequate sense of its merits.

The President of the Association exhibited much judgment and good taste in so accurately striking a key-note for subsequent performances, and in contemplating the Medical Profession at a meeting of its members by the light of our general popular estimation. Nor was the tact less remarkable with which he demolished, one by one, dogmas of an ignorant or interested scepticism, without elevating their heresiarchs into fictitious importance by the overt mention of their names, or their so-called systems by adoption of their unauthorised terminology.

It is, as we recently said, desirable that addresses of this nature should come before the world stamped with the authority of cultivated and unbiased minds. The scholar-like essay in question exhibits these qualities; nor is it, perhaps, unconsciously that it draws a just corollary from the Aristotelian doctrine, *πᾶσα διδασκαλία ἐκ προγιγνωσκομένων*, in claiming for the complex art of Medicine only an intelligent deference from intellects prepared for its reception by previous study and acquirement.

The Address in Medicine, delivered by Dr. William Budd, while it nowhere trenched on ground occupied by its forerunner, exhibited in another department a high degree of originality and appropriateness. The eloquent manner of its delivery, though, perhaps, a rare merit in a member of our brotherhood, did not lessen its value as a specimen of Medical logic; it dealt, moreover, with a master question of therapeutical science, and boldly brushed aside the impediments of facts loosely observed, as well as inductions weak or inconsecutive which at the present day are apt to encumber the advance of speculative truth. The speaker's remarks on the prevalent practice of accumulating facts and figures, statistics, and observations, in a heterogeneous and indiscriminate manner are indeed susceptible of wider application. Is it not to be observed that the state of scientific thought now existing in some sort marks the converse of that which was assailed by the great author of the "Novum Organon." It was his task, and the foundation of his renown, that he showed how nature was to be interpreted "by the eliciting or creating of axioms from experiment," by the preparation of a "complete and accurate natural and experimental history," by searching out and recording facts with precision and impartiality. Since his time science has spread with a rapid advance, and innumerable stores of well-observed realities have been recorded in her archives; but how many of these are still unconnected and unutilised by "that true and legitimate induction, the very key of interpretation" which he justly held to be the crown of the work, and the logical bond by which the scattered atoms were to cohere into a consistent whole. We seem to have passed from the epoch of "Anticipation of Nature," by metaphysical theories, into one where the hoarding and treasuring of minute grains of truth is more common, and more a habit of scientific men's minds than their thoughtful co-ordination into a series, and their deliberate arrangement in such wise as may best extract volatile principles from the caput mortuum of crude observation. It appears as though this conviction lay implicitly below the surface of Dr. Budd's address; and while we cordially coincide in the view, we tender our acknowledgments to him for the illustration which he afforded in his subsequent instance. The Medical history of clavelée, or variola ovina, as it fell from him, sounded like an able thesis, still wearing, however lightly, the fetters of method, and the garb of formality, but preserving in spite of these the keenness of perception and the instinctive discrimination of essential from trivial and accidental which has given an almost prophetic force to the speculations of men like Niebuhr, Faraday, or Morgagni, and which should be predominating characteristics in the mind of every Physician.

The Address in Surgery was rather that of a sound practical Surgeon than of one aspiring to the qualifications of an orator. Nor indeed did the treatment of carbuncle by potassa fusa, however important as a branch of manipulative Surgery, offer much hold for theory or eloquence. The writer's aim will doubtless have been fulfilled if a more rational and successful practice is brought to bear on a common but dangerous malady.

The Address on Chemistry we were able, by the courtesy of its author, to present in an unabridged condition; and the more willingly, as its topics less easily admit of the epitomising process than those of other speakers. It will be for our readers to judge whether the comments which were elicited by its delivery are borne out by its closer study in a printed form.

The Address in Midwifery, probably from the nature of its subject, offered less salient points than any other for subsequent recapitulation. But it was not for this reason the less valuable or interesting; and few of those who heard it but will have left the room possessed of clearer views and more recent observations on obstetric science than they had before. Dr. Swayne has long held high rank as one who sees with his own eyes, whose writings bear traces of original observation, and who, as he can trust himself, so he is worthy to be trusted by others.

The other papers read to the Association were of considerable interest, though the limited time allotted to them, and the fatigue inevitable at the close of long attention, excused slight impatience on the part of the audience.

The dinner with which the meeting terminated, as it is an inevitable wind-up to any deliberative assembly of Englishmen, so it is apt to present a general family likeness, which renders the description of one a fair representation of all.

Not only the proceedings of the Association, but everything connected with the visit, must have inspired strangers with a conviction that our Profession is in a healthy state in this provincial metropolis, that the population is fortunate in possessing Medical advisers of ability and cultivation, and that it responds to their praiseworthy efforts by the esteem and high social standing which it grants them. Those of the visitors who were enabled to inspect the Hospital will have found it in a perfect state of efficiency, possessing a handsome museum, and all appliances necessary for a flourishing Medical school. The evening *conversaziones* were agreeably and hospitably carried out, nor was the abundant private hospitality of the resident Medical men on a less ample scale. Those who had the good fortune to be at the gathering will long retain cheerful recollection of days pleasantly as well as profitably spent.

In considering how far these doings bear out the programme and fulfil the objects of the British Medical Association, we must undoubtedly commence by accrediting it with securing annually to the Profession a satisfactory reunion and a series of orations by four or five of the best men who can be selected from districts where the meeting is held. Moreover, the Association does good service to Medical literature by the publication of a weekly journal. Of the merits or demerits of this particular periodical it would be superfluous, nay almost impertinent to speak. Nor need we inquire whether it produces a practical return equivalent to its necessarily considerable expenses. But as contemporaries ourselves, we enter our protest against unworthy rivalry, and heartily rejoice at the diffusion of sound information by any literary organ of respectability. The world of Medical literature is large enough for all. Here, as in other branches of political economy, the supply creates the demand; and it cannot be doubted that a public habituated to an abundant provision of such news soon learns to value its opportunities, to make greater demands on its purveyors, and to distinguish with a more practised eye wheat from chaff, what is sound from what is light and valueless.

Here, however, we stop. When we come to the influence exercised by the British Medical Association on Government, on the ruling bodies of our own Profession where such influence is desirable, whether matters of principle or detail, we are obliged to state it as very nearly, if not completely *nil*. For instance, on vaccination, in the relief of distressed Medical men,—spite of Mr. Propert's appeals and fascinations,—in the solution of vexed questions regarding science and art, in relation to the public Medical services, it does nothing, or at most embodies its leagued wisdom in certain inoperative petitions and resolutions. Even what should be particularly its province—the extortion of justice to provincial Medical men and provincial Medical schools, the abatement of the monopoly which now crowds students into London wards and leaves county Hospitals vacant—meets with scant notice from this corporation. It winds up its services to education and the advancement of Medicine with the noble offer of twenty guineas for a prize, which apparently dies famished for want of competitors.

These remarks are offered in no captious spirit. We have shown above our willingness to do full justice and award generous praise to the Association for what it does; nor must we be censured if we call attention, for its own good and for that of the Profession, to what it does not.

THE WEEK.

ACTIONS AGAINST MEDICAL MEN.

The peculiar liability of Medical Practitioners to be made the victims of vexatious and vindictive lawsuits brought against them by persons actuated by personal enmity or the hope of gain is a subject that daily gains in importance, and demands united action on the part of the Profession at large. To practise Medicine is absolutely becoming dangerous. Any needy adventurer who may conceive him or herself injured by an expression of Professional opinion, or who has met with an untoward accident in the course of Medical or Surgical treatment, or who may have the wit to bring accusations which are easily made, but with difficulty refuted, may wreak revenge or ill-will on the character and prospects of the Medical attendant, and unfortunately there is no lack of hungry lawyers eager to take the risks and share the proceeds of the speculation. It is utterly useless to expect any active legislation for the protection of Medicine in this particular. The only course that remains open is for Medical men to combine for the purpose of mutual protection. To many a hard-working, upright, skilful Surgeon an action at law, even if a favourable verdict be obtained, is nothing short of pecuniary ruin, and even the most prosperous in our ranks may be cruelly injured both in reputation and circumstances. Spotless and unimpeached character, the highest and most widely recognised acquirements, only render the victim a more conspicuous target for the shafts of legal injustice and a surer investment for calculating cupidity. Not to allude to cases which are in the memory of all, we need but refer our readers to a letter of our Liverpool correspondent, published in our last Number, in proof of the necessity of what we urge. A Surgeon, in removing a piece of bone, has the misfortune to break his chain-saw, some links of which become concealed in the wound, and after a time are discharged. Thereupon the patient commences proceedings to recover damages for mal-treatment, and after subjecting the defendant to all the expense, trouble, and anxiety of providing a defence, at the last moment, finding that he stands a good chance of being non-suited, withdraws his action, and leaves the defendant without redress. The case of Mr. Hake, of Liverpool, is even worse. A Hospital patient, supported by charity, who has been the subject of long-standing dislocation of the femur, has actually commenced a suit against this gentleman, because the bone accidentally snapped during the process of reduction! We also know, at the present time, of two metropolitan practitioners of high standing who have an action pending against them for placing a woman suffering from delirium tremens under temporary restraint.

The case of Miss Morgan *v.* Dr. Lingen, of Hereford, is another—although somewhat different—instance of the risks to which a Professional man is exposed. Stripped of all unimportant details, the case is simply this:—A governess brings an action against a Medical Practitioner for libel, because the latter has informed her relatives and connexions of his belief that she is under a mental delusion in supposing that half a dozen people are hostile to her. The proofs of the mental delusion are not merely verbal expressions, but a course of behaviour, to say the least, of a very eccentric complexion, such as meeting her supposed enemies with gestures and grimaces expressive of hostility in the public streets, and, it is said, on one occasion striking one of them openly at a flower show. We offer no judgment as to the original *casus belli*, if any existed, between the Hereford ladies; we only call attention to the fact that a Practitioner of well-known respectability and standing has been subjected to the risk and annoyance of an action for the expression of a Medical opinion. As usual, the doctor had been the benefactor of the plaintiff and her family, attending them gratuitously, and rendering them various services. The jury, we are glad to state, found a verdict for the defendant, but, of course, the taxed costs do not represent the lawyer's bill, to say nothing of the mental worry which the proceedings have entailed.

In the face of these facts, the only thing which the Profession can do is to enter on a defensive league; to support by general subscription a society which shall undertake to provide means for the defence of its members, should they be unfortunate enough to be singled out for legalized persecution, and to hold them harmless, at least in purse. We have already expressed our opinion that this would be a proper function to be performed by the British Medical Association. By initiating amongst its large body of adherents such a movement, that Association would assume a character of practical utility which, even amidst its acknowledged successes, it has not yet acquired, and would become, in truth, the representative and rallying point of Professional interests. For ourselves, we are certain that no more necessary and worthy object could be accomplished by the power it undoubtedly possesses.

INDIAN MEDICAL SOCIETIES.

One of the most interesting items of business at the annual meeting of the British Medical Association was the consideration of a request for affiliation from an association just formed in Calcutta on similar principles and for similar purposes with themselves. And we have received a copy of the rules of "The Medico-Chirurgical Society," recently established by the students of the Medical College of Bengal. The Medical Association has been formed mainly through the energy of Dr. Chuckerbutty, formerly a distinguished student of University College, London, and will consist largely of native practitioners. The students of the Bengal Medical College are also chiefly Bengallis, though Europeans are to be found among them. We hail with great pleasure these proofs of progress in our Eastern brethren—of their increasing appreciation of the brotherhood of science, and of their desire to emulate the march of European Medicine. We heartily wish success to both societies.

PROFESSOR SANDS COX AND THE QUEEN'S COLLEGE, BIRMINGHAM.

Mr. W. Sands Cox has addressed a letter to the *Birmingham Daily Gazette*, in which he replies *seriatim* to the various accusations brought against him in reference to his conduct in the affairs of the College. As Mr. Cox's management has been the subject of severe criticism, we readily publish some extracts from his letter, which, to say the least, place the subjects under discussion in a very different light. Mr. Cox writes:—

"*As to the Financial Condition of the College.*—The financial condition of the College is in a greatly improved state. The tradesmen's debts included in the schedule furnished to me by the ex-treasurer, through the liberality of the friends of the College, have been paid off, and the mortgagees and the bank are now the principal claimants.

"In a detailed statement of the Warneford Trust accounts, presented to the Council of the College in 1861, my co-trustee, Mr. Chancellor Law, states:—'On the whole, the Warneford Trusteees claim the credit of having saved the College very nearly £1000.' The claims therefore of the Warneford Trustees against the College may be considered as disposed of, especially as there are no claimants for arrears.

"*As to the Students.*—During the past Session 85 students have been in attendance,—namely, Medical students 54, law students 16, theological students 15.

"In reference to the Medical students an important fact has been recently reported to the Council by the Resident Medical Tutor, Dr. Foster, in his terminal report, dated July 31, 1863. Dr. Foster reports:—

"'That although some thirty Medical students of the College have presented themselves for examination before the different examining bodies during the past academical year, only one student of the College has been rejected—a fact which speaks not only most highly for the efficiency of the present staff of Medical Professors, and for the industry and attention of the students, but also places the College in a most enviable position, as it is very questionable if any Medical school in the United Kingdom has equalled or approached the Queen's College in the success of its students during the past year.'

"The number of students in the theological department, lauded at the late trial as the '*flourishing department*,' although liberally endowed, has for the last few years been on the decline. The number of students in 1859 amounted to 30, at the present time it is reduced to only 15. I am reluctant to state the cause of this defalcation.

"*As to the resignation of Wardens.*—It has been sent forth to the public that the Wardens resigned owing to 'my overbearing conduct.' In one case a student was expelled in an illegal manner, and at a meeting, at which Lord Lyttelton presided, it was resolved unanimously, 'That in consequence of the non-observance of the law in the case of the dismissal of Mr. G. M——, the Council consider him still a member of the College, and will take the earliest opportunity of considering the offences imputed to him, and deciding on what steps the case requires.' The Warden retired.

"In another case—In contravention of the rules of the College, the Warden issued a regulation to permit students to be out two nights a week until twelve o'clock. What was the consequence? Two students got into disgrace: one was rusticated, and sent home to his friends at Boulogne-sur-Mer with his rustication in his pocket. A long correspondence ensued between the father and the Council. In one communication the father remarked, 'I must repeat that the regulations made by the Warden, that *students* might stop out two nights every week until twelve o'clock, *without any inquiry*, is contrary to the printed laws under which I entered my son at the College, is a breach of faith towards myself, and towards every parent who has placed his child within your walls.'

"Again, in another letter—'That a clergyman of the Church of England, the resident head of a college, should make such a rule, that for two nights in each week students might stop out until twelve o'clock at night, and go where they pleased in a town like Birmingham, full of pandemoniums and dens of all sorts of iniquity, appears to me a paradox. Who does not know the description of characters that infest the streets of Birmingham at twelve o'clock at night? Why, the great enemy of the human race, if he were permitted to draw up a code of regulations for the College, could scarcely have framed one more suited to destroy the morals of the pupils, and the character and well-being of the institution.' The Arts Council passed a resolution which led to the retirement of the Warden. The retirement of a third from his office was necessitated, from his being called by his Bishop into residence, he having accepted a living in Somersetshire. The cause of the retirement of the last Warden is too well known to call for mention.

"*As to the Hospital.*—At a meeting of the Committee of Council of the Queen's Hospital, held on July 10 last, Mr. J. Phillips stated 'that the Hospital came into existence in 1841, and that it was ushered into existence by some of the Council of the Queen's College, but he could not find that those gentlemen gave any endowment towards it, or that they did anything but give their services to promote it, the only sum which he could find was given through them towards its expenses was £1000 by Dr. Warneford, who presented £1000 for an endowment for a clergyman; beyond that he could find no larger sum than £20 or £30.'

"The Hospital was entirely built by the *patrons and friends of the College.* Dr. Warneford placed in my hands honoraria to the amount of £2000 in acknowledgment of Professional services rendered to him. He also fitted up the Dispensary, the Surgery, and chapel, and gave twenty beds complete to the wards. In the list of donors, members of the Council of the College, are to be found the late Principal, Dr. Johnstone, £100; the Vice-Principal Law, £200; the Treasurer, the late Mr. Piercy, £100; Mr. T. Upfill, £50; Mr. William Room, £42; the Rev. V. Thomas, £50; Mr. E. T. Cox, £50; the Earl of Craven, £105; the Earl Howe, £100; the Earl of Harrowby, £100; the Earl Fitzwilliam, £50; the Earl of Stamford, £50. The builder became embarrassed soon after the commencement of the work. I took upon myself the builder's contract; the bank allowed me to draw to the extent of £2000, and I myself paid the workmen's wages every Saturday night. Before the opening of the wards I obtained *from the friends of the College the whole amount of funds* required, and the Hospital was completed and opened within fifteen months *without one single farthing of debt.*

"Before any subscriptions were solicited the laws on which the Hospital was founded were issued. *The Hospital is essentially a clinical one in connection with the College, and cannot be severed therefrom without a direct violation of the right of property.*

"*With regard to the late arrears of interest due to the Hospital and Professors,* the arrears were contracted during the period of my holding no office in the College; on my resuming office, the bank advanced me £500, on my personal security, to discharge the fees due to the latter, and the former debt was also discharged. Since then the interest *has been regularly paid* to the Hospital *half-yearly*, and the Professors *receive in full* all their fees, subject to certain payments for prospectus, advertisement, etc., and which they themselves have agreed to discharge. From May, 1861, to the present date, August, 1863, the amount of fees paid for Hospital practice is £298 10s., a sum not sufficient to cover the fees to the Clinical Professors, should Dr. Sutton maintain his claims.

"*As to the Charity Commissioners.*—It has been loudly asserted that no steps have been taken in reference to the Charity Commissioners' report. At a meeting held October 25, 1861, the Right Hon. the Principal in the chair, on the motion of Mr. J. Suckling, seconded by Professor Dr. Wade, it was resolved—'That a committee be appointed to frame the heads of a bill for the amendment of the charters, trust deeds, and bye-laws, with a view of applying through the Charity Commissioners to Parliament for an Act; that the committee do lay the same before the next meeting of the Council. That Mr. Sands Cox and Mr. Law do constitute a committee for the purpose defined in the foregoing minute, with power to add to their number any members of the Council not exceeding five.' On October 29, after most careful consideration, a detailed report was presented by the committee, received and adopted; the same was engrossed and sealed with the College seal, and forwarded to the Charity Commissioners.

"On November 11, 1861, a reply was received, which concluded with the following passage:—'The Commissioners are very anxious that this most useful institution may be rescued from its present position of embarrassment; but they feel, unless the parties themselves can agree or will submit their differences to arbitration, any efforts made in its favour will also be made under great embarrassment and difficulty.'

"In a former communication, the Charity Commissioners say 'they will lend all assistance in their power to carry any beneficial change into effect. Should it be necessary to have recourse either to the Court of Chancery or to Parliament, *the most perfect unanimity will be necessary* to ensure success, and to avoid oppressive and ruinous expenses.'

"*As to the Inquiry.*—I do not individually impute the slightest reflection on the Inspector of the Charity Commissioners, by whom I was treated with the greatest courtesy during the inquiry. Mr. Martin could only form his opinion from the evidence before him, but I ask the friends and supporters of the College to look at the names of the parties by whom the inquiry was instituted, and the names of the parties by whom the inquiry was supported. Dr. Blunt, M.D., Aberdeen, 1859, a former student of the College, with Dr. Bond, M.B., Lond., 1857, also a former student, conducted the examination. At a meeting of the Council, held August 22, 1859, it was moved that Dr. Blunt be dismissed from the office of Dean of the Faculty. An amendment was proposed by Mr. Clift, and seconded by Dr. Fleming—'That a special meeting be called on Friday, August 26, at 11 a.m., to consider the conduct of the Dean of the Faculty in accepting office in Sydenham College, and deciding what course should be taken.' Dr. Blunt resigned.

"Why was not Lord Lyttelton, the Principal of the College for more than ten years, than whom a more able or painstaking man of business never existed, examined? Why was Mr. Law not openly examined? Also the Warden, Mr. Cumming; the Treasurers, Messrs. Upfill and C. Ratcliff; Professors Johnstone, Knowles, and Parker, professors of nearly twenty years' standing? Why were Mr. F. I. Welch, Mr. S. Haines, Mr. Baron Webster, and other members of the Council not called upon to give evidence?

"*As to Closure of the Medical Department.*—The Medical Department, after twenty-five years of anxiety and labour, was closed—by whom? The Principal, the Vice-Principal, Dr. Waller, Messrs. Clift, Sargant, and Chamberlain. What have these gentlemen, in any shape whatever, done for the College? Nothing, in my opinion, save of a destructive tendency?

"*With regard to the Requisition.*—Had it been signed by half a dozen names of standing and position in the College it would have been complied with. What has been the object of the republication in the *Birmingham Daily Post* of evidence taken three years ago appears to surpass general comprehension.

"*With regard to the late Action.*—I may shortly remark that it never has been my desire to limit the expression of a free press. The persecution to which I have been subjected by a branch of the press, and silently submitted to by me for some years past, is sufficient proof of my forbearance. Advised as I was by the opinion of an eminent counsel that

I was libelled, it appeared to me desirable, for obvious reasons, to bring the matter to an issue. I have reason to believe that, though I was unsuccessful in obtaining a verdict, the general feeling of the most competent judges is strongly in my favour, although the doctrine propounded at the trial 'That even a libel upon an individual may be published in a document otherwise proper for the public to know,' would appear rather a dangerous rule for the future government of the public press."

FROM ABROAD—STATE OF PUBLIC HEALTH IN PARIS—M. COURTY ON ENGLISH SURGERY—PROMOTIONS IN THE LEGION OF HONOUR—ELECTION AT THE ACADEMY OF MEDICINE.

The French Medical press suffers from the trammels placed upon it as well as the political press, and many subjects, which with us would form fertile topics of discussion, are prohibited, especially if their examination might have a tendency to bring the omniscience and the omnipotence of the powers that be into question. We all remember the absolute silence it was compelled to observe, not only concerning the fact of the *coup-d'etat*, but even on the results that might be regarded as purely Professional which ensued. Not a single case brought to any of the Hospitals, not a single clinical remark was ever reported in any of the Medical journals; so that, in fact, a person having only these sources of information at his command, would have remained profoundly ignorant that an event, attended with so much bloodshed, and so instinct with Surgical teachings, had ever occurred. That "authority" still keeps as watchful a sway as ever the following circumstance proves:—M. Latour, editor of the *Union Médicale*, gave an account in that journal of the 11th instant of the condition of the public health in Paris. He stated that the intense heat which had prevailed in that city lately had given rise to great derangements of the gastro-hepato-intestinal apparatus, resembling on a reduced scale those produced by tropical climates. Diarrhœa and dysentery had been especially prevalent, and some cases closely resembling cholera had been observed. Besides this, Paris had become the seat of an epidemic of typhoid fever, which is now prevailing there in an intense form, giving rise to a mortality far surpassing its ordinary limits. In a service of one of the Hospitals twenty deaths took place among forty-eight cases,—a death-rate equalling that of the cholera or plague. Of the 360 beds devoted to internal diseases at the Lariboisière Hospital, 131 were actually in the occupation of fever patients. In this state of things, as this is the time of year when children return for their vacations, M. Latour called upon the Medical attendants of families to represent to them the condition of public health in the capital. The statement above made is denied, and if it is inaccurate it should be denied; but it is the mode in which this is done which we are desirous of calling attention to. It is in the form of a *communiqué* from the Minister of the Interior, and consists in a flat contradiction; without, however, furnishing any proof of this latter statement being anywise more accurate than that which it contravenes. Diarrhœa and dysenteries, it declares, are just what are always observed at this time of the year, and *only* two cases of cholera of an epidemic character have been met with. It is certainly true that there are numerous cases of typhoid fever, but it is highly incorrect to say that they are fatal, for it is generally allowed that the epidemic is of a benign character. At the Lariboisière, the mortality from typhoid, so far from being 50 per cent., has only amounted to 5 deaths in 133 cases. By the laws of the French press, this *communiqué* must be published at the head of the journal, without the editor being allowed to impugn its statements or explain the error he originally committed, if error it be.

M. Courty, of Montpellier, has published in the *Gazette Hebdomadaire* an interesting account of his recent visit to England. It is chiefly taken up with an account of some ovariotomies which he saw performed by Mr. Spencer Wells and Dr. Tyler Smith; and he has a high opinion of the capabilities of the operation, and of its future in France. He approves of the small special Hospitals at which such operations are usually performed, but he seems to have a somewhat exaggerated idea of the number of these in London. Besides the absence of the sickly and abominable odours observed in the ill-ventilated wards of the French Hospitals, and to which he justly attaches importance as regards the issue of operations, he says that there are other differences which characterise the spirit of English Surgery itself. Among these is to be remarked the general spirit of the nation, that feeling which impels it not towards mere change—for few are so constant as the English, whether in their customs or their Surgery (as is seen by their old-standing predilection for union by the first intention)—but towards progress, or rather towards action, English Surgery, indeed, seems eminently active, and consequently enterprising and audacious, if not in all ways, at least in certain directions. Patients and Surgeons alike participate in this impulse, and the former would offer a resistance in France which is not met with in England. The patient wishes to be rid of his infirmity, as for him it would seem to live is not merely to exist, but to act. Every impediment to action is insupportable, and he does not hesitate to brave the hazards of Surgery for the sake of the chance of reconquering the free possession of himself. "It is to be observed also that, in so vast a town as London, with a highly developed civilization, the taste and necessity for specialties is still more developed than in Paris; and that the men of enterprising minds who pursue them push them to limits which are as yet not familiar to us. If I am not in error, these reflections upon the difference of the scientific spirit of the two nations, on the disposition to activity, the enterprising character of English patients and Surgeons, and the compulsory development of specialties among them, assist in exhibiting the sensible differences which distinguish English and French Surgery, in comprehending that there is more courage than temerity in undertaking great operations such as ovariotomy, and in explaining the success which has crowned this praiseworthy boldness."

From among the shower of names contained in the decrees designating those who have been promoted to the various grades of the Legion of Honour, we select the following as likely to interest our readers:—*Grand Cross*—M. Dumas, the celebrated chemist. *Commander* — Professor Cruveilhier. *Officers*—M. Chapeau, First Physician of the Marine at Martinique, for the services he rendered to the Mexican expedition; Professor Grisolle; Professor Guibourt; Professor Quatrefages; M. Pasteur; and M. Boucher de Perthes. *Chevaliers*—M. Maisonneuve, of the Hôtel Dieu; M. Rochard, Physician of Prisons; M. Antelme, Inspector of Lunatic Asylums; and between thirty and forty other members of the Medical Profession.

The election into the Section of Obstetrics in the Academy of Medicine terminated by M. Blot obtaining 34 of the 67 votes present, his competitor, M. Pajot, obtaining 21. This last gentleman, who is a great favourite with the students by reason of his efficient mode of lecturing, is to have, it is said, the Midwifery Chair in the Faculty of Medicine, left vacant by the death of Moreau.

THE OBSTETRIC SCHOOLS OF PARIS, VIENNA, AND WURZBURG.

By CHARLES G. RITCHIE, M.D.,
Resident Physician to the Royal Hospital for Sick Children, Edinburgh.

The following remarks on the facilities offered to the obstetrical student in Paris, Vienna, and Würzburg will be interesting to any one who may think of passing some time at any of these great foreign schools.

I. PARIS.

There are two lying-in Hospitals in Paris; the larger, the Maison d'Accouchement, contains beds for 308 patients, but is unfortunately still appropriated to the instruction of midwives. The other institution consists of the half of the Hôpital des Cliniques; it is at present under the superintendence of M. Blot, who has lately succeeded M. Paul Dubois in that post, which the latter so long occupied with honour to himself, and incalculable advantage to the Profession. M. Blot's department consists of eight wards: one for nurses, one for delivery, and the remainder for women either bordering on the end of pregnancy or who have already been accouched.

The labour room (salle d'accouchement) contains three of these beds so aptly termed by the French "lits de misère." One of them is railed off to prevent the students crowding around it, and thus in operation cases every one has an opportunity of observing the different manipulations of the Professor. The patient is not brought into the ward until the pains are strong, and shortly after parturition is accomplished she is wheeled back into one of the salles des femmes en couches. These are six in number: four small ones, containing each four beds, and two larger ones with twelve beds; there is thus accommodation for forty patients. The arrangement into small wards is useful, not only as facilitating cleansing operations, but as offering an opportunity of trying various methods of treatment on patients isolated from each other. For instance, some time ago, one of the little wards was treated hydropathically, all its inmates being douched locally several times a-day.

The students are divided into so many sets of six or seven each. Every day one of these sets is on duty, that is to say, the students belonging to it have the right of remaining in the Hospital, and of assisting in any delivery which may occur.

In addition to this, M. Tarnier, the Chef de Clinique, gives a practical course of vaginal examination. Three times a-week ten gentlemen are called to examine women in different stages of pregnancy. Each of these students forms his own opinion as to the period of pregnancy, etc., and M. Tarnier afterwards corrects his diagnosis.

The Hôpital des Clinique, though small, presents a very fine field to the student of midwifery. About 100 women are there delivered monthly, and as many cases are sent to the Hospital only after they have been found to be abnormal, it follows that the number of natural labours is far beneath the average met with in general practice.

The attention of the student is especially directed to the phenomena which immediately succeed labour. Each of the puerperal women is visited and carefully examined daily, and the Professor takes that opportunity of pointing out and enlarging upon any subject of interest which may present itself. Nor are the diseases of pregnancy wholly neglected. It is true that few women are received who are not in labour, but if any patient present herself offering something interesting and instructive, she is admitted without difficulty.

M. Tarnier's practical course is one of great utility; it is the only one, as far as I am aware, where the earlier stages of pregnancy are brought systematically under the eye of the student.

Such are the opportunities of studying practical midwifery in Paris. It is true that a certain number of beds is allotted to obstetrical cases in some of the general Hospitals; the number in each is, however, so limited as not to offer any great attraction.

The chief of the theoretical courses, and the only one recognised by British Schools, is delivered in summer by M. Pajot, in the École de Médecine. Nothing can be more impressive than the simple and forcible manner in which M. Pajot elucidates his subject. The course, however, only extends over a period of four months, and as it is the custom to lecture three times a-week, much that is valuable has to be glossed over, or wholly omitted. Of the other systematic courses, that of M. Bailly may be mentioned as eminently practical. M. Bailly lectures in winter in the Ecole Pratique. His class is usually small, and he takes great pains in causing each of his pupils to perform the principal obstetrical operations upon the lay figure.

It is almost unnecessary to add that in Paris abundant opportunities exist of studying the branches accessory to midwifery. The Cliniques of M. Nonat, Jobert and others on Diseases of Women, the Children's Hospital, and M. Coste's lectures on "Embryogeny," offer a field wide enough to satisfy the most ardent student.

II. VIENNA.

The Maternity Hospital (Gebärhaus) of Vienna forms a part of the enormous General Hospital. It is the largest institution of the kind in the world, upwards of 8000 unmarried women being there delivered annually. The Gebärhaus consists of two divisions: the first clinique intended for Medical men, and the second reserved for the instruction of midwives. In the first clinique the annual average of deliveries is 4500. Women in labour are received into the lying-in room,—an airy ward containing twenty beds. A few hours after delivery they are transferred to the puerperal department, where they remain generally for ten days. If well, they are then sent over to the Foundling Hospital, where they are obliged to serve as nurses for some weeks, if they wish to leave their children to the care of the public. Any case of fever occurring in the wards is at once removed to a remote part of the building. The daily Professorial visit is made by Dr. Carl Braun at noon. The labour ward is first visited, and anything interesting which may have happened within the preceding twenty-four hours is made the subject of remark, either at the patient's bedside or in the lecture-room. After this, a flying visit is paid to the puerperal wards.

It is needless to observe that following the visit is a very small part of the work to be done in the Hospital. Every Tuesday a paper is left upon the table to be signed by those who wish to practise during the following week. From these signatures two lists are drawn up, containing a maximum of twenty names each. Four days of the week are allotted to those on the first list, the remaining three to those on the second. The chosen men have a right to remain constantly in the Hospital, and to deliver the patients, in turn, of course, in the event of the labour becoming instrumental, under the superintendence of the Professor or his assistants.

Although there are very many students who follow the visit, it is not difficult to be almost constantly on the practising list. German students are not fond of night-work, and in the event of a choice being necessary it is always made with the strictest impartiality. It is seldom that more than two or three pupils remain all night in the labour room, and as ten, fifteen, and even twenty births sometimes occur in the course of one night, a great deal of practice may be had in a very short time. An obstetrical operation is never entrusted to a student, unless he can produce a certificate of having already performed it on the dead body. For this purpose a private course is given by Dr. Madurowicz, the first assistant. In it Dr. M. first performs the various obstetrical operations on an eviscerated female subject, and they are afterwards repeated by each individual member of the class. Another private course is given by Dr. Kuhn, the junior assistant. Its object is the diagnosis of the period of pregnancy and the position of the fœtus, the measurement of the pelvis, catheterisation, etc., etc. The manner of conducting each of these courses is highly to be commended. Dr. Kuhn limits the number of his pupils to twelve, and there is never any lack of material. The department for diseases of women (Die Gynæcologische Abtheilung) is small; the cases are, however, well selected. The speculum and uterine sound are in constant use, and Dr. Braun gives a fair trial to any new method of treatment which may be proposed.

Puerperal fever may be well studied in the Gebärhaus of Vienna. In the beginning of the winter before last it was epidemic, and post-mortem examinations of the disease were of daily occurrence. The disease gradually subsided, but it can well be imagined that in a Lying-in Hospital of such size it seldom happens that the fever ward is entirely empty.

There is an excellent Children's Hospital in Vienna, where both in- and out-door patients are treated. It is not easy for a student to gain admission to the Foundling Hospital, but if he succeed, he will there find a rich mine to explore. I have already incidentally alluded to the study of pathological anatomy, but it would be difficult indeed to find any one branch of Medicine which may not be studied with advantage at Vienna.

III. WURZBURG.

The University of Würzburg has long enjoyed a reputation as a Medical School, and in no branch is it so distinguished as in midwifery. Scanzoni has followed in the footsteps of Kiwisch his teacher, and Würzburg is the rendezvous of lady patients and obstetrical students. The Lying-in Hospital is a small building, intended not only for the accommodation of parturient women, but for those also who are suffering under disease of the uterus and its appendages. The arrangements for facilitating the study of the phenomena of labour are much the same as those already described as existing in Paris and Vienna; the number of annual deliveries is, however, so small, as not to offer any attraction. Professor Scanzoni delivers a clinical lecture every morning during the summer session. A case is taken up, and it is entered into with a fulness and depth which I have never heard surpassed. To a young man these cliniques cannot fail to be eminently useful, especially when the subject is gynæcological. They are strikingly practical; the information imparted has not been gained in the closet, but at the bedside, and while there is no affectation of a systematic lecture, yet the whole subject of the disease in question is so carefully looked into, so jumbled about until it has presented all its different sides, that on referring to a theoretical treatise it is difficult to find that a single observation has been omitted. Kölliker's lectures on Embryology are another attraction to Würzburg. They are rather demonstrations than lectures, the whole subject being most fully illustrated by microscopical preparations and drawings.

In comparing the Parisian and Viennese Schools, the former may be fairly classed as theoretical, the latter as practical. In Paris the most ample opportunities exist of becoming acquainted with the science of midwifery. True, the obstetrical art may also be studied in Paris, but not nearly to such good effect as in the German School.

Vienna, again, is deficient in theory. The Professor who is at the head of the obstetrical school is a most able man, thoroughly conversant with the professional literature of England and France. I think, however, that it is taken too often for granted that the students are equally well informed. It seems to me that many men who attend regularly become midwives rather than accoucheurs. I mean that although they may be able to treat any case with which they are familiar, they will be entirely at a loss on meeting one of which they have never seen the analogue.

One word, before I conclude, as to the comparative advantages of civil and Hospital practice to the student in midwifery. By the latter method a very large number of cases may be studied in a comparatively short time, and as no two cases of labour are precisely alike, it would follow that the more one sees, the better accoucheur one becomes. There are, however, practical disadvantages in Hospital practice. The student who has two or three labours going on under his eye at the same time, is apt to have very confused ideas of the succession of phenomena in each. Again, he has the moral support of the Hospital with him, and is too much inclined not to be so anxious and attentive as if he had the whole responsibility on his own shoulders. Lastly, every appliance is at hand, the nurses are well instructed; and the young Medical man, on first being deprived of those advantages, is surprised to find what a number of wants arise, of the existence of which he had never before dreamed.

REVIEWS.

The Pathology and Treatment of Phlegmasia Dolens; being the Lettsomian Lectures on Midwifery delivered before the Medical Society of London, 1861-2. By F. W. Mackenzie, M.D., M.R.C.P. Lond., Physician to Queen Charlotte's Lying-in Hospital, etc. 8vo, pp. 131. John Churchill and Sons. 1862.

Few diseases have excited more discussion than phlegmasia dolens, and yet it cannot be affirmed that our knowledge of its etiology and pathology is complete. Accumulated observations have led the pathologists of the present day to regard the outward manifestations of the disease as the result generally of inflammatory obstruction of the veins of the affected extremity. Dr. Mackenzie, however, adopts a different view. "Crural phlebitis," he says, "in a pure and uncomplicated form cannot give rise to all the local and general phenomena of phlegmasia dolens, and therefore cannot be its proximate cause, and the conclusion that appears to me to be inevitable is, that phlebitis, occurring as a local disease, and from the operation of a local cause, is never associated with the phenomena of phlegmasia dolens, nor under any circumstances can give rise to it; but that when it arises from, or in connexion with constitutional causes calculated simultaneously to infect the blood generally, then the lesion of the veins is very generally accompanied with the symptoms of phlegmasia dolens. The effective cause therefore of the phlebitis, as of the crural affection (phlegmasia dolens), is the constitutional condition out of which both have arisen."

Dr. Mackenzie has been led to this conclusion by clinical observation of the disease and critical examination of reported cases, and by the results of numerous experimental inquiries into its cause. The following deduction is made from an examination of sixty puerperal and forty non-puerperal cases of disease:—

"The antecedents and probable causes of the disease are of the most widely-spread and diversified character; they are not peculiar to the puerperal period, or to the female sex, and we may at once discard all such theories of the disease as connect it exclusively with either lochial or lacteal suppression, uterine injury or inflammation, or, in fact, with any peculiar state of the uterine system subsequently to labour. And inasmuch as all the antecedent circumstances (puerperal fever, other forms of fever, exposure to cold, dietetic errors, tubercle) detailed tend to a common consequence, viz., an abnormal condition of the blood, it is to this common result we must look for the immediate origin of the disease."

Here it is to be observed that our author assumes the abnormal condition of the blood to be the consequence, and not the cause, of puerperal fever, and that phlegmasia dolens is a sequent and not an accidental concomitant of this disease. Puerperal fever, however, is so often and so manifestly the result of local contaminations of the blood, that we cannot concur in this theory. Dr. Mackenzie himself admits that the uncomplicated variety of phlegmasia dolens may be produced in the anæmic state by the direct absorption of putrescent matters from the maternal passages.

Referring now to the experimental part of the inquiry, we find that our author limits himself to an investigation of "the question of how far crural phlebitis, in a pure and uncomplicated form, can give rise to the very complex phenomena of phlegmasia dolens, or how far phlebitis itself can be traced up to, and deduced from, some more general and diffused morbific agency capable of producing the various other local and general symptoms which are co-ordinately met with."

To determine this question, Dr. Mackenzie had recourse to three series of experiments, detailed in the 36th volume of the *Medico-Chirurgical Transactions*. The first series of experiments were confined to ligaturing the iliac veins; the second to extensive irritation of the lining membrane of the same vessels, by means of chemical and mechanical irritants; and the third to compression of the femoral veins by metallic compresses. The local effects of ligature were of a transient rather than of a persistent character, and were confined in a great measure to swelling, stiffness, and an inability or disinclination to move the affected extremity; there was no tenderness or preternatural heat; the swelling had the character of ordinary œdema, and was equally diffused over the extremity. As soon as the collateral circulation was established, the swelling rapidly subsided.

The same transient symptoms of common œdema followed the application of chemical and mechanical irritants to the "crural veins, from the femoral up to the termination of the iliac in the cava."

Compression and injury of the coats of the femoral vein resulted in still less mischief.

The conclusion deduced by our author from these experiments is, "that the symptoms of phlegmasia dolens are not producible by inflammation and obstruction of the crural veins alone, however rapidly or extensively induced. There is an absence of any constitutional fever; the swelling is neither elastic nor abiding, but simply œdematous; and there is no impairment of either its sensory or motor functions. With such facts clearly demonstrated, there is, I submit, no other conclusion than that the affection of the veins is not the primary or essential lesion, or the proximate cause of the complaint."

This is a conclusion which we cannot accept. Phlegmasia dolens, whatever may be its ultimate cause, must be regarded, we believe, as the direct result of very extensive obstruction, probably inflammatory, of most of the veins of the leg. The above experiments only prove that such general obstruction as results from obliteration of the main vein of the limb is insufficient to produce the disease in its complete form.

The author next goes on to inquire experimentally into the pathological origin of phlebitis. The first series of experiments show that injury, or irritation and subsequent inflammation, of the external coats of veins does not, so long as the inner coat remains in its natural condition, produce obstructive phlebitis.

Another series of experiments show, on the other hand, that, on re-admitting the current of blood into a vein whose lining membrane has been irritated by solutions of metallic salts, the phenomena of obstructive phlebitis are fully produced. If, however, the blood be excluded altogether from the vein, irritation of its lining membrane fails to produce any further obstruction.

With a view of ascertaining the effects of vitiating the column of blood in particular veins, in producing phlebitis, Dr. Mackenzie undertook numerous and varied experiments. Dilute lactic acid was generally injected into the veins, and extensive venous obstruction followed the tract of the vitiated blood in its course towards the heart. But the author remarks, "it is certain that this could not have been the effect of phlebitis, because both the time was too short to allow of its production, and also because the appearance of the lining membrane throughout was such as to negative this view."

Having thus succeeded in producing the symptoms of obstructive phlebitis by local injury of the blood and blood-vessels, an important question still remained for solution, viz., how far phlebitis could be artificially produced by vitiating the general mass of the blood? To determine the question, some of the great veins were ligatured and dilute lactic acid thrown into them above the ligature towards the heart. When experiment was made upon the femoral vein, crural phlebitis on the most extensive scale, and associated with various other lesions of the affected limb, was produced. In twenty-four hours the affected limb was greatly swollen, its temperature was raised, and it was painful on pressure. "Can it be doubted," asks the author, "that these are among the most characteristic symptoms of phlegmasia dolens?" Post-mortem examination showed obstruction of the principal veins of the limb, infiltration and vascularity of the areolar tissue, and in places swelling and congestion of the muscles. "Can it again be doubted," again asks the author, "that these are among the principal morbid appearances which are met with in regard to the limb in fatal cases of phlegmasia dolens? In fact, it cannot be doubted that we have here a case of phlegmasia dolens artificially constructed by vitiating the blood by lactic acid. I maintain, then, that the theory of the disease I contend for is thus established by synthetical construction, as it had been deduced from analytical investigation," viz., that phlebitis cannot be regarded as the proximate cause of the disease, and that this resides in a morbid condition of the whole of the blood. "It appears to me," says the author, "that the results of these experiments are essentially affirmative of the truth of the principle which I have advanced; for they show that not only may large tracts of the venous system become obstructed by the action of vitiated blood in its progress onwards towards the heart, but that other portions of the venous system may also become obstructed by its action after it has gone the round of the circulation, and this, I would submit, has been shown to occur in a sufficient number of instances to justify the general conclusion that whenever the blood is vitiated, whether from local or constitutional causes, not only particular veins, but large portions of the venous system, may, under certain circumstances, become obstructed and inflamed, *and this independently of any direct injury of the veins on the one hand, or local vitiation of the blood on the other.*"

Although the sentence in italics renders this conclusion in great measure nugatory, the author's meaning is still apparent, viz., that a general vitiated condition of the blood, independent of any local cause, may produce phlegmasia dolens.

Without denying the possibility of such a mode of causation, we cannot accept it on the evidence furnished by Dr. Mackenzie's experiments. Injection of lactic acid into the iliac vein after ligature of the femoral produced obstruction by firm coagulum as far as the cava; the natural result of course was complete obstruction to the return of any portion of venous blood from the limb,—a more perfect result than could of course be obtained by ligature of the external iliac. The distended veins of the limb below the ligature presented no other appearance than those due to complete obstruction. The presence or influence of lactic acid in the limb was not therefore demonstrated. Again, in another experiment, after the injection of dilute lactic acid into the right femoral vein towards the heart it was found that not only were the iliac veins of the same side firmly obstructed, and a layer of coagulum deposited upon and adherent to the cava from some distance, but that the femoral vein of the opposite extremity was also obstructed to a considerable extent. Judging from observation alone, are we justified in concluding that the obstruction of the circulation in the left vein was due to lactic acid derived from the right limb, transmitted through the heart and lungs before it reached the left limb? We think it safer, in the absence of further inquiry, to assume that the lactic acid caused at once a coagulation about the orifice of the left iliac vein, and that at most the arrested current of blood in this vein and its branches may have derived, by contact and diffusion, a contamination from the lactic clot in front of it, which would facilitate the coagulation of the retarded blood below it.

We cannot conclude these remarks without calling attention to a deduction made by our author from some of his experiments above mentioned as to the probable nature and cause of obstructive phlebitis. "The phenomena of obstructive phlebitis," says Dr. Mackenzie, "depend upon a disturbance of the relations which normally exist between the blood and the lining membrane of the veins, and this is immediately due to an altered state of the vitality of the lining membrane of the venous system. When I exclude the blood from a portion of the venous system, and apply some irritating solution (solution of corrosive sublimate, or nitrate of silver) to its interior, the blood immediately coagulates on readmission, because I have already disturbed or impaired the vital condition of the venous tissue so treated, and have thus destroyed or impaired one of the forces by which the circulation is maintained." We think that Dr. Mackenzie has overlooked here a very efficient cause of the coagulation, viz., the presence of some portion of the coagulative fluids used to impair the vital condition of the lining membrane of the vein. It is certain that a very considerable alteration of the lining membrane of a vein or artery, *e.g.*, arthritic degeneration, is quite compatible with the maintenance of the circulation.

Although, therefore, we cannot adopt Dr. Mackenzie's conclusions as to the independence of the so-called obstructive phlebitis and phlegmasia dolens, and to the frequent production of the latter of these diseases by a *general* vitiation of the blood, or by a "disturbance of the relations normally existing between it and the lining membrane of the veins;" we feel much indebted to him for his facts; they will prove of much service to future investigators, who cannot fail to acknowledge that Dr. Mackenzie has worked well, and contributed largely to the advancement of our knowledge of the nature of phlegmasia dolens.

The Angler Naturalist. A Popular History of British Fresh-water Fish, with a Plain Explanation of the Rudiments of Ichthyology. By H. Cholmondeley Pennell. Illustrated by upwards of 100 Wood Engravings. Pp. 425. London: John Van Voorst, Paternoster-row. 1863.

A good book is like a bottle of good wine. For as we perchance may draw a cork, and pour out half a glass and hold it up to the light and take a sip, and, finding the liquor good, may go on sipping till we have emptied the bottle—which we hold is the highest compliment that can be paid to a bottle of wine—so we take up Mr. H. Cholmondeley Pennell's "Angler Naturalist," and begin to dip here and there, then to read a whole chapter, and so we go on until we have fairly devoured the whole book. It is a book of a pleasant look; nice red edges that require no cutting, and the covers turned down to preserve the leaves. Its scope is indicated by the title-page; it is a compendious outline of ichthyology in general, with an especial history of British fresh-water fish, intended mainly for such anglers as have the good sense to add the pleasures of science to those of mere sport. It is abundantly illustrated with engravings out of Yarrell's "History of British Fishes," and is altogether as satisfactory a book as we have lately met with. The naturalist ought to have it that he may learn to catch, and cook, and eat the fish that he yet only knows as an "object of natural history;" and the angler should have it that he may refute Dean Swift's too famous definition.

The first chapters give a good popular account of the anatomy and physiology of fish, and of their classification. Then each family, genus, and species is taken in turn, beginning with the perch and other acantho-pterygians, including our familiar friend the stickleback. The carp family follows.

We are sorry to learn that carp show their acuteness of hearing by disturbing our author most pertinaciously during family prayers, by springing and splashing about in the water. This family includes carp, barbel, gudgeon, minnow, tench, dace, roach, etc. (It seems, by-the-by, that women are instinctively good anglers for gudgeon; also some clergymen. We fully believe it.) Next comes the pike, once more prized than salmon; then the genus *salmo;* next the burbot, a member of the cod family, which, by-the-by, we have never eaten, and shall be thankful to experiment on if any gentle angler amongst our readers will give us the opportunity by sending us a basket. Lastly come the eels and lampreys. The description of the relationship of the various *species* of the *genus salmo;* their resemblance when young—so pregnant a fact to the philosophical anatomist—the history of the successive changes of parr, smolt, grilse, and salmon, is very well worked out, and is given in a succinct though not too dry a style.

Whilst taking leave of this book, let us communicate one culinary secret, in return for the burbot (all other fish are acceptable) which without doubt will be sent us. When you cook a tench, let him be plain boiled in his skin, and serve up therewith some melted butter and a little vinegar made *boiling hot.*

FOREIGN CORRESPONDENCE.

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GERMANY.

Berlin, July.

Some time ago a committee was chosen by the Medical Society of Berlin for the purpose of settling certain pending questions in aural Surgery. The committee consisted of Messrs. Virchow, Krieger, Leyden, and other well-known men, and have quite recently reported the results of their experiments, which have been conducted in the most unexceptionable manner. They are as follows:—If air is blown into the Eustachian tube by means of a wide silver catheter, the membrana tympani being intact, this air does not penetrate into the cavity of the tympanum; and it is equally impossible to inject, by this method, any considerable amount of liquid into that cavity, even if the permeability of the tube has been proved by previous sounding and auscultation; but both air and liquids may be injected if a fine elastic catheter is introduced up to the osseous part of the Eustachian tube. The sounds which are heard on injecting air are only produced if the latter method is adopted, and in the cavity of the tympanum itself; while such sounds as are perceived on using the ordinary silver catheter, are most likely caused within the pharyngeal end of the tube. A change of these latter is due to an impediment in the conduction of sound; and we may find out therefrom whether the impediment is movable or immovable; but it does not give us any hints as to any changes that may have taken place in the coats of the tube or the cavity of the tympanum. It is impossible to decide at present whether we may, by blowing in air with the fine catheter, succeed in removing "free effusions" from the cavity of the tympanum. It is settled beyond doubt that liquids may, through the catheter, be introduced into the cavity of the tympanum. The diagnostic and therapeutical value of sounding can therefore not be doubted.

The properties of the Calabar bean, respecting which you lately published an interesting paper, by Mr. Soelberg Wells, have also attracted much attention here of late. Mr. Wells has sent several preparations of this drug over to our illustrious oculist, Dr. A. Von Graefe, and the latter has just communicated his experiments with them to the Medical Society. Their results agree entirely with those that have been arrived at by the English observers, and add some new facts to those already established. The effect upon the sphincter pupillæ and the ciliary muscle came on in fourteen minutes if the weak, and in twelve if the strong extract was administered; it lasted for two days with the former, and for three with the latter. The maximum of myosis lasts from six to eighteen hours. Another effect is a peculiar change of the faculty of accommodation, which sometimes begins simultaneously with, or a few minutes after, myosis has set in. The chief feature of this is an increase of the state of refraction, which may be expressed by the dioptric effect of a lens from $\frac{1}{10}$th to $\frac{1}{8}$th. At the same time the near point of the eye is nearer than usual. This change of refraction reaches its maximum about ten minutes after the administration of the bean, and remains so from ten to twenty minutes. After three-quarters of an hour the normal state of refraction is very nearly re-established. It is therefore a true spasm of accommodation, and in this respect Calabar bean is the direct antagonist of atropine. There are other disturbances of optic sensibility, such as macropy, but the ophthalmoscope does not show any disturbances in the circulation of blood in the retina. The effect of the bean upon the ciliary muscle is quite independent from that upon the iris, as in a patient who is deprived of the iris, but is able to see, the effect became just as apparent as in others. The drug acts by penetrating into the anterior camera, and has therefore an isolated action upon the eye, just as atropine; it excites directly the motor nerve-fibres which animate the ciliary muscle and the sphincter pupillæ. In birds, on which atropine has no action, Calabar bean is likewise nearly ineffectual; the same may be said of fishes and amphibia. The only drug which possesses some analogy to the bean is opium.

Dr. Von Graefe also made experiments with Calabar bean after having first administered a solution of atropine. If the dose of the latter has been strong, the effect of the former may be entirely counteracted. But if some time has elapsed after the use of atropine, or if the dose given was weak, the pupil is moderately contracted, and there is a considerable increase of the state of refraction. Atropine acts far longer upon the apparatus of accommodation than Calabar bean; and it may therefore happen that after the effect of the latter has passed off, that of the former may again become apparent. In mydriasis the bean has the same effect as in healthy eyes; and even in glaucoma this may be observed, unless the iris should have already become quite atrophied. In fistula of the anterior camera the effect is far less marked, but not entirely counter-balanced.

I now continue my report on Professor Traube's researches on the nature of fever. With regard to the urine of patients suffering from fever, the Professor has drawn attention to the peculiar circumstance that, as regards its physical and chemical properties, it is almost identical with the urine of patients suffering from certain diseases of the heart, viz., such in which the pressure in the aortic system is considerably diminished. The characters of the urine are: diminished quantity, high specific gravity, reddish hue, disposition to the formation of sediments consisting of urates, and frequently the presence of small quantities of albumen and hyaline gelatine coagula. This is another proof of the correctness of Professor Traube's theory as to the contraction of the smaller arteries being the immediate cause of all febrile symptoms. In consequence of this, the pressure in the smallest vessels of the parenchyma of the kidneys is necessarily diminished, through the coats of which the constituents of the urine are excreted from the blood, and thus there appear to be the same fundamental conditions in fever and those diseases of the heart where the arterial pressure is decreased.

The restlessness of patients suffering from fever, and the disturbance of the cerebral function generally to be observed in them, are no doubt mere effects of the increase of temperature. The innumerable multitude of primitive nerve-fibres being bathed with blood which is warmer than usual, it is easy to see that their state of irritation should be transferred to the centres of the nervous system. The stupor, however, which is sometimes observed in such patients, is due to the contraction of the smallest arteries of the brain, whereby an insufficient amount of blood is carried to this organ.

Guy's Hospital. — The Peruvian Minister has sent £50 to the Superintendent of Guy's Hospital, to be employed for the relief of patients on their discharge, and as "a slight mark of the deep gratitude which the Government of Peru will always entertain for the generous assistance afforded by the Hospital to their infirm soldiers and seamen."

Royal Colleges of Physicians and Surgeons, Edinburgh.—Double Qualification.—The names of the following gentlemen were inadvertently omitted from the list published last week of those who passed the first Professional Examinations for the double qualification of the Colleges in the recent sittings of the Examiners, viz.:—Alexander Hamilton, of Falkirk; Francis M'Bean Stewart, of Dundee; George Ogilvy Roberts, of Edinburgh; Daniel Frederick Bateman, of Cork; Alexander Hunter Miller, of Edinburgh; Arthur Handyside, of East Lothian.

GENERAL CORRESPONDENCE.

THE CHANCE OF FRACTURE IN THE REDUCTION OF DISLOCATIONS. — CASE OF DISLOCATION OF THE FEMUR INTO THE OBTURATOR FORAMEN OCCURRING IN THE COURSE OF DISEASE OF THE HIP.

Letter from Mr. R. Harrison.

[To the Editor of the Medical Times and Gazette.]

Sir,—*Apropos* your Liverpool Correspondent's remarks of last week with reference to Medical trials, and especially that pending against the Surgeons of the Northern Hospital in this town, who were unfortunate enough to fracture a femur in attempting to reduce a dislocation of some standing, I think the accompanying case is of considerable importance, as tending to show that if such trials are to be sanctioned by the public, the efforts of our Hospital Surgeons will be seriously trammelled in their endeavours to afford relief in cases of extraordinary difficulty, and I think you will agree with me, Sir, if such is to be the case, not only the Profession but the public will be the sufferers.

I am, &c.,

Reginald Harrison,

Late House-Surgeon Liverpool Royal Infirmary.

54, Rodney-street, Liverpool.

LIVERPOOL ROYAL INFIRMARY.

After the operations to-day (August 10) Mr. Bickersteth brought into the theatre a case illustrative of an unusual form of dislocation of the femur as a result of acute inflammation of the hip-joint. The following is a brief history of the case :—

Peter J., aged 13, the son of healthy parents, while returning from school eighteen weeks ago, was suddenly seized with acute pain in the left knee, extending upwards to the hip. The following morning he returned to his work, but the pain in the knee and hip becoming much worse, he was obliged to give up and return home. At this time there was neither swelling or redness of the limb, but the pain he describes as being most severe. He took to his bed, and by means of pillows placed the leg in the position that gave him most relief, and which, he says, is precisely similar to that it now assumes. He never left his bed, and after six weeks the hip suddenly became much swollen, in a few days the swelling had quite subsided; the pain, however, continued until a fortnight before his admission, when it entirely left him, and since then he has had no uneasiness whatever. On leaving his bed, though free from pain, he found the limb was useless, for it was fixed in the same position as he had all along kept it. When admitted (August 13), Mr. Bickersteth pointed out to his class the very characteristic position of the limb: the thigh much abducted and flexed; apparent lengthening; rotation outwards; all symptoms associated with dislocation of the head of the femur into the obturator foramen. He also remarked as to the great rarity of this dislocation occurring in course of disease of the hip. He gave directions for a photograph of the limb to be taken, and postponed treatment until he had examined the case under the influence of chloroform, in order that he might have a better opportunity of judging whether any part of the deformity was due to spasmodic muscular contraction. There was no swelling beyond a slight puffiness in the groin, and there were no symptoms of any inflammatory action existing.

18th.—The patient was brought into the theatre to-day, and, being placed fully under the influence of chloroform, a careful examination only tended to confirm the diagnosis previously arrived at. Mr. Bickersteth remarked to those in the theatre, that though fully aware of the treatment to be pursued in such a case, and with considerable confidence that his efforts to render the limb a useful one would be attended with success, he was also aware that some risk of fracturing the femur would attend any attempt at reduction; and, until an extraordinary trial now pending against the Surgical staff of a public institution in this town had terminated, he did not feel inclined to incur any risk of subjecting himself to similar annoyance. The boy was then removed to his bed."

The Royal Household.—The office of Surgeon to Her Majesty's Household has become vacant by the death of Mr. Charles Henry Phillips.

REPORTS OF SOCIETIES.

ROYAL SOCIETY.

Thursday, June 18.

Major-General Sabine, President, in the Chair.

A communication, by Thomas Graham, F.R.S., was read on

THE MOLECULAR MOBILITY OF GASES.

The molecular mobility of gases is here considered in reference chiefly to the passage of gases, under pressure, through a thin porous plate or septum, and to the partial separation of mixed gases which can be effected, as will be shown, by such means. The investigation arose out of a renewed and somewhat protracted inquiry regarding the diffusion of gases (depending upon the same molecular mobility), and has afforded certain new results which may prove to be of interest in a theoretical as well as in a practical point of view. In the diffusiometer, as first constructed, a plain cylindrical glass tube, rather less than an inch in diameter and about ten inches in length, was simply closed at one end by a porous plate of plaster of Paris, about one-third of an inch in thickness, and thus converted into a gas receiver.(a) A superior material for the porous plate is now found in the artificially compressed graphite of Mr. Brockedon of the quality used for making writing pencils. This material is sold in London in small cubic masses about two inches square. A cube may easily be cut into slices of a millimetre or two in thickness by means of a saw of steel spring. By rubbing the surface of the slice without wetting it upon a flat sand-stone, the thickness may be further reduced to about one-half of a millimetre. A circular disk of this graphite, which is like a wafer in thickness, but possesses considerable tenacity, is attached by resinous cement to one end of the glass tube above described, so as to close it and form a diffusiometer. The tube is filled with hydrogen gas over a mercurial trough, the porosity of the graphite plate being counteracted for the time by covering it tightly with a thin sheet of gutta percha. On afterwards removing the latter, gaseous diffusion immediately takes place through the pores of the graphite. The whole hydrogen will leave the tube in forty minutes or an hour, and is replaced by a much smaller proportion of atmospheric air (about one-fourth), as is to be expected from the law of the diffusion of gases. During the process the mercury will rise in the tube, if allowed, forming a column of several inches in height,—a fact which illustrates strikingly the intensity of the force with which the interpenetration of different gases is effected. The native or mineral graphite is of a lamellar structure, and appears to have little or no porosity. It cannot be substituted for the artificial graphite as a diffusion septum. Unglazed earthenware comes next in value to graphite for this purpose. The pores of artificial graphite appear to be really so minute that a gas in mass cannot penetrate the plate at all. It seems to be molecules only which can pass; and these may be supposed to pass wholly unimpeded by friction, for the smallest pores that can be imagined to exist in the graphite must be tunnels in magnitude to the ultimate atoms of a gaseous body. The sole motive agency appears to be that intestine movement of molecules which is now generally recognised as an essential property of the gaseous condition of matter. According to the physical hypothesis now generally received,(b) a gas is represented as consisting of solid and perfectly elastic spherical particles or atoms, which move in all directions, and are animated with different degrees of velocity in different gases. Confined in a vessel, the moving particles are constantly impinging against its sides, and occasionally against each other, and such collisions take place without any loss of motion, owing to the perfect elasticity of the particles. Now, if the containing vessel be porous, like a diffusiometer, then gas is projected through the open channels, by the atomic motion described, and escapes. Simultaneously the external air or gas, whatever it may be, is carried inwards in the same manner, and takes the place of the gas which leaves the vessel. To the same atomic or molecular movement is due the elastic force, with the power to resist compression, possessed by gases. The molecular movement is accelerated by heat and retarded by cold; the tension of the gas being increased in the first instance, and diminished in the second. Even when the same gas is present both within and without the vessel, and is therefore in contact with both sides of the porous plate, the movement is sustained without abatement; molecules continuing to enter and leave in equal number, although nothing of the kind is indicated by change of volume or otherwise. If the gases in communication be different, but possess sensibly the same specific gravity and molecular velocity, as nitrogen and carbonic oxide do, an interchange of molecules also takes place without any change in volume. With gases opposed of unequal density and molecular velocity, the amount of penetration ceases of course to be equal in both directions. These observations are preliminary to the consideration of the passage through a graphite plate, in one direction only of gas under pressure, or under the influence of its own elastic force. It is to be supposed that a vacuum is maintained on one side of the porous septum, and that air or some other gas, under a constant pressure, is in contact with the other side. Now a gas may pass into a vacuum in three different modes, or in two modes besides that immediately before us. 1. The gas may enter the vacuum by passing through a minute aperture in a thin plate, such as a puncture in platinum foil made by a fine steel point. The rate of passage of different gases is then regulated by their specific gravities, according to a pneumatic law which was deduced by Professor John Robison from Torricelli's well-known theorem of the velocity of efflux of fluids. A gas rushes into a vacuum with the velocity which a heavy body would acquire by falling from the height of an atmosphere composed of the gas in question, and supposed to be of uniform density throughout. The height of the uniform atmosphere will be inversely as the specific gravity of the gas, the atmosphere of hydrogen, for instance, sixteen times higher than that of oxygen. But as the velocity acquired by a heavy body in falling is not directly as the height, but as the square root of the height, the rate of flow of different gases into a vacuum will be inversely as the square root of their respective densities. The velocity of oxygen being one, that of hydrogen will be four, the square root of sixteen. This law has been experimentally verified. (c) The times of the effusion of gases, as I have spoken of it, are similar to those of the law of molecular diffusion, but it is important to observe that the phenomena of effusion and diffusion are distinct and essentially different in their nature. The effusion movement affects masses of gas, the diffusion movement affects molecules; and a gas is usually carried by the former kind of impulse with a velocity many thousand times greater than by the latter. The effusion velocity of air is the same as the velocity of sound. 2. If the aperture of efflux be in a plate of increased thickness, and so becomes a tube, the effusion rates of gases are disturbed. The rates of flow of different gases, however, assume again a constant ratio to each other when the capillary tube is considerably elongated, when the length exceeds the diameter at least 4000 times. These new proportions of efflux are the rates of the "Capillary Transpiration of Gases." (d) The rates were found to be the same in a capillary tube composed of copper as they are in a tube of glass, and appear to be independent of the material of the capillary. A film of gas no doubt adheres to the inner surface of the tube, and the friction is really that of gas upon gas, and is consequently unaffected by the nature of the tube-substance. The rates of transpiration are not governed by specific gravity, and are indeed singularly unlike the rates of effusion. The transpiration velocity of oxygen being 1, that of chlorine is 1·5, that of hydrogen 2·26; of ether vapour at low temperatures the same, or nearly the same number as hydrogen; of nitrogen and carbonic oxide half the velocity of hydrogen; of olefiant gas, ammonia, and cyanogen 2, double or nearly double that of oxygen; of carbonic acid 1·376, and of the gas of marshes 1·815. In the same gas the transpirability of equal volumes increases with density, whether occasioned by cold or pressure. The transpiration ratios of gases appear to be in constant relation with no other known property of the same gases, and they form a class of phenomena remarkably isolated from all else at present known of gases. There is one property of transpiration immediately bearing upon the penetration of the graphite plate by gases. The capillary offers to the passage of gas a resistance analogous to that of friction, proportional to the surface, and consequently increasing as the tube or tubes are multiplied in number and diminished in diameter, with the area of discharge preserved constant. The resistance to the passage of a liquid through a capillary was observed by Poiseuille to be nearly as the fourth power of the diameter of the tube. In gases the resistance also rapidly increases, but in what ratio has not been observed. The consequence, however, is certain that as the diameter of the capillaries may be diminished beyond any assignable limit, so the flow may be retarded indefinitely, and caused at last to become too small to be sensible. We may therefore have a mass of capillaries of which the passages form a large aggregate, but which are individually too small to permit a sensible flow of gas under pressure. A porous solid mass may possess the same reduced penetrability as the congeries of capillary tubes. Indeed, the state of porosity described appears to be more or less closely approached by all loosely aggregated mineral masses, such as lime-plaster, stucco, chalk, baked clay, non-crystalline earthy powders like hydrate of lime or magnesia compacted by pressure, and in the highest degree perhaps by artificial graphite. 3. A plate of artificial graphite, although it appears to be practically impenetrable to gas by either of the two modes of passage previously described, is readily penetrated by the agency of the molecular or diffusive movement of gases. This appears on comparing the time required for the passage of equal volumes of different gases under a constant pressure. Of the following three gases, oxygen, hydrogen, and carbonic acid, the time required for the passage of an equal volume of each through a capillary glass tube, in similar circumstances as to pressure and temperature, was formerly observed to be as follows:—

(a) "On the Law of the Diffusion of Gases," *Transactions of the Royal Society of Edinburgh*, vol. xii., p. 222; or, *Philosophical Magazine*, 1834, vol. ii., pp. 175, 269, 351.

(b) D. Bernouilli, J. Herapath, Joule, Krönig, Clausius, Clerk Maxwell, and Cazin. The merit of reviving this hypothesis and first applying it to the facts of gaseous diffusion, is fairly due to Mr. Herapath. See "Mathematical Physics," in two volumes, by John Herapath, Esq. (1847).

	Time of capillary transpiration.
Oxygen.	1
Carbonic acid . . .	0·72
Hydrogen	0·44

Through a plate of graphite, of half a millimetre in thickness, the same gases were now observed to pass, under a constant pressure of a column of mercury of 100 millimetres in height, in times which are as follows:—

	Time of molecular passage.	Square root of density (oxygen 1).
Oxygen. . . .	1	1
Hydrogen . . .	0·2472	0·2502
Carbonic acid . .	1·1886	1·1760

It appears then that the times of passage through the graphite plate have no relation to the capillary transpiration times of the same gases first quoted above. The new times in question, however, show a close relation to the square roots of the densities of the respective gases, as is seen in the last table; and so far they agree with theoretical times of diffusion usually ascribed to the same gases. The experiments were varied by causing the gases to pass into a Torricellian vacuum, and consequently under the full pressure of the atmosphere. The times of penetration of equal volumes of gases were now—

	Times.	$\sqrt{\text{Density}}$.
Oxygen. . .	1	1
Air . . .	0·9501	0·9507
Carbonic acid .	1·1860	1·1760
Hydrogen . .	0·2505	0·2502

This penetration of the graphite plate by gases appears to be entirely due to their own proper molecular motion, quite unaided by transpiration. It seems to offer the simplest possible exhibition of the molecular or diffusive movement. This pure result is to be ascribed to the wonderfully fine porosity of the graphite. The interstitial spaces, or channels, appear to be sufficiently small to extinguish transpiration, or the passage of masses entirely. The graphite becomes a molecular sieve, allowing molecules only to pass through. With a plate of stucco, the penetration of gases under pressure is very rapid, and the volumes of air and hydrogen passing in equal times are as 1 to 2·891, which is a number for hydrogen intermediate between its transpiration volume 2·04 and diffusion volume 3·8; showing that the passage through stucco is a mixed result. With a plate of biscuit ware, 2·2 millimetres in thickness, the volume of hydrogen rose to 3·754 (air = 1), approaching closely to 3·8, the molecular ratio. The rate of passage of a gas through graphite appeared also to be closely proportional to the pressure. Further, hydrogen was found to penetrate through a graphite plate into a vacuum, with sensibly the same absolute velocity as it diffused into air; establishing the important fact that the impelling force is the same in both movements. The molecular mobility may therefore be spoken of as the diffusive movement of gases; the passage of gas through a porous plate into vacuum, as diffusion in one direction or single diffusion; and ordinary diffusion, or the passage of two gases in opposite directions, as double, compound, or reciprocal diffusion.

(c) "On the Motion of Gases," *Phil. Trans.*, 1846, p. 573.

(d) *Phil. Trans.*, 1846, p. 591, and 1849, p. 349.

Atmolysis.—A partial separation of mixed gases and vapours of unequal diffusibility can be effected by allowing the mixture to permeate through a graphite plate into a vacuum, as was to be expected from the preceding views. As this method of analysis has a practical character, and admits of wide application, it may be convenient to distinguish it by a peculiar name. The amount of the separation is in proportion to the pressure, and attains its maximum when the gases pass into a nearly perfect vacuum. A variety of experiments were made on this subject, of which perhaps the most interesting were those upon the concentration of the oxygen in atmospheric air. When a portion of air confined in a jar is allowed to penetrate into a vacuum through graphite or unglazed earthenware, the nitrogen should pass more rapidly than the oxygen in the proportion of 1·0668 to 1; and the proportion of oxygen be proportionally increased in the air left behind in the jar. The increase in the oxygen actually observed when the air in the jar was reduced from 1 volume to 0·5 volume, was 0·48 per cent.; to 0·25 volume, was 0·98 per cent.; to 0·125 volume, was 1·54 per cent.; to 0·0625 volume, was 2·02 per cent. Or, the oxygen increased from 21 to 23·02 per cent. in the last sixteenth part of air left behind in the jar. The most remarkable effects of separation are produced by means of the tube-atmolyser. This is simply a narrow tube of unglazed earthenware, such as a tobacco-pipe stem two feet in length, which is placed within a shorter tube of glass, and secured in its position by corks, so as to appear like a Liebig's condenser. The glass tube is placed in communication with an air-pump, and the annular space between the two tubes is maintained as nearly vacuous as possible. Air or any other mixed gas is then allowed to flow in a stream along the clay tube, and collected as it issues. The gas so atmolysed is of course reduced in volume, much gas penetrating through the pores of the clay tube into the air-pump vacuum; and the slower the gas is collected the greater the proportional loss. In the gas collected, the denser constituent of the mixture is thus concentrated in an arithmetical ratio, while the volume of the gas is reduced in a geometrical ratio. In one experiment the proportion of oxygen in the air after traversing the atmolyser was increased to 24·50 per cent., or 16·7 upon 100 oxygen originally present in the air. With gases differing so much in density and diffusibility as oxygen and hydrogen, the separation is of course much more considerable. The explosive mixture of two volumes of hydrogen and one volume of oxygen, gave oxygen containing only 9·3 per cent. of hydrogen, in which a taper burned without explosion; and with equal volumes of oxygen and hydrogen, the proportion of the latter was easily reduced from 50 to 5 per cent.

(To be continued.)

MEDICAL NEWS.

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Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, August 13, 1863:—

Edward Dawson, Manchester; William Thomas Davies, York Town, Surrey; Frederick William Coates, Salisbury.

The following gentlemen also on the same day passed their First Examination:—

William Henry Vipau, Guy's Hospital; James Burwood Watson, University College.

N.B.—During the past year, 1862-3, 464 candidates have presented themselves at the Hall for Examination in the Science and Practice of Medicine.

Dr. Heyfelder.—Dr. Heyfelder, the author of an esteemed work on excisions, has been appointed Chief Surgeon to the Russian army in Poland.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Burton, Thomas C., M.D. Glasg., has been appointed Superintendent of the Waterford Lunatic Asylum.

Cooper, Horace, M.R.C.S. Eng., has been elected Resident Surgeon to the Reading Medical Dispensary.

Evans, George, M.R.C.S. Eng, has been elected Surgeon to the St Marylebone General Dispensary, Welbeck-street.

Grubb, R. T., M.R.C.S. Eng., has been appointed House-Surgeon to the Metropolitan Free Hospital.

Harvey, Robert, M.D. Aberd, has been elected Resident Surgeon-Accoucheur to the Birmingham General Dispensary.

Moon, Robert Charles, has been appointed House-Surgeon to the Surrey Ophthalmic Hospital, St. George's-circus.

Mush t, William Boyd, M.B. Lond., has been elected Physician to the Royal General Dispensary.

Roberts, John, L.R.C.P. Lond., has been elected Resident Medical Officer to the Bath Mineral Water Hospital.

Robertson, John C. G., L.R.C.P. Edin., has been appointed Assistant-Medical Officer of the Female Department, Middlesex County Lunatic Asylum, Hanwell.

Simpson, J. H., M.R.C.S. Eng., has been appointed Second Assistant-Medical Officer at the Kent County Lunatic Asylum, Barming-heath.

Thompson, Henry, F.R.C.S. Eng., has been appointed Surgeon to University College Hospital.

DEATHS.

Aiton, William, M.D. Edin, at South Portland-street, Glasgow, on July 13, aged 77, Surgeon R.N.

Alexander, Dr. S., at Cincinatti, Ohio, U.S., formerly of Antrim, Ireland, on June 7.

Bagnell, Robert A., M.B., T.C. Dub., at Dublin, on July 29, aged 48.

Bird, George Gwynne, L.R.C.P. Lond., at Northampton-place, Swansea, on August 2, aged 60.

Cronyn, Abraham P., L.A.H. Dub., at Callan, Co. Kilkenny, on July 29.

Cumming, George, M.D. Edin., at Abbey-street, Chester, on August 12, aged 82.

Fraser, William, M.D., at Jamaica, West Indies, formerly of Liverpool, on June 26, aged 44.

Hadwen, Henry Edward, Surgeon-Major H.M. Madras Army, at Ramsgate, on August 14.

Huston, W. K., M.D., at Creswick, Victoria, Australia, on May 8, aged 36.

Hutchinson, Dr. H., at Draperstown, Londonderry, on July 10, formerly Surgeon H.E.I.C. Service.

Kinahan, Charles J., L.R.C.S.I., Staff Assistant-Surgeon Army, on June 26.

Lamb, Charles B., L.R.C.S.I., at Kilcoleman-park, on July 13, Assistant-Surgeon R.N.

Langstaff, Theobald F., L.R.C.S.I., Assistant-Surgeon Army, at Lucknow, East Indies, on June 19.

McCarthy, James F., M.D., at Cookhill House, Ingersell, Canada West, formerly of Cork, on June 26.

Munton, George O., M.R.C.S. Eng., of Bourne, Lincolnshire, at Morton, on July 25, aged 57.

Ross, James Ker, L.R.C.S. Edin., at Portlogan, Leswalt, N.B., on July 25, aged 31.

Sterndale, John Stanley, M.R.C.S. Eng., at Littleport, Ely, Cambs., on June 8.

University Intelligence.—University of London.—Examination for Honours:—

M.B. Preliminary Scientific Examination, 1863.

Chemistry and Natural Philosophy.

Second Class.—Arthur McDougall, Owen's College; Stephen Wootton Bushell, Guy's Hospital; Charles Kelly, King's College.

Third Class.—Arthur Bayley Adams, London Hospital, Augustus Constable Maybury, St. Thomas's Hospital, and John Maude Whitwell, University College, equal; James Campbell Brown, University of Aberdeen; William Warwick Wagstaffe, B.A., St. Thomas's Hospital.

Biology.

First Class.—Henry Greenway Howse, Guy's Hospital, Exhibition and Gold Medal.

Second Class.—James Campbell Brown, University of Aberdeen.

Third Class.—William Turner Thiselton Dyer, King's College.

First M.B. Examination, 1863.

Anatomy.

First Class.—Peter Maury Deas, University and Surgeons' Hall, Edinburgh, Exhibition and Gold Medal; Philip Brookes Mason, University College, Gold Medal.

Second Class.—Bryan Holme Allen, University College; Olliver Thomas Duke, Guy's Hospital; Thomas Henry Green, University College.

Physiology, Histology, and Comparative Anatomy.

First Class.—Peter Maury Deas, University and Surgeons' Hall, Edinburgh, Exhibition and Gold Medal; Philip Brookes Mason, University College, Gold Medal.

Second Class.—Revett Coleridge Pewles, King's College; Frederick William Richards, St. Bartholomew's Hospital.

Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry.

First Class.—Bryan Holme Allen, University College, Exhibition and Gold Medal; George Henry Savage, Guy's Hospital, Gold Medal; Philip

Brookes Mason, University College; William Vicary Snow, University College.

Second Class.—Thomas Henry Green, University College; Frederick William Richards, St. Bartholomew's Hospital.

Royal College of Surgeons of England. — The Library and Museum of this Institution will be closed on and after Tuesday, the 1st proximo, until Thursday, the 1st of October next, to allow of the necessary dusting and cleaning.

The President's Soirée.—Bristol.—On Thursday evening the President, Dr. Symonds, gave a magnificent reception at his residence, Clifton House. The company included all the members of the Association who were in Bristol, and the local celebrities. In the drawing-rooms the visitors were entertained with exquisite glee-singing, and with the exhibitions of choice specimens of works of art. But the *chef-d'œuvre* of the evening was a novelty, which we hope some day again to see imitated, but which we shall never see surpassed. From the front of Dr. Symonds' house there descends from the terrace a small but beautiful lawn, the trees of which slightly approach at the lower part, so that the house is, as it were, the base of a triangle, the sides of which are formed by trees. On the balustrades Mr. Phillips placed two lime lights, with reflectors so arranged that he could light up the lawn and the trees which enclosed it. The effect was perfect; a grand natural theatre was improvised, on the green floor of which the artillery band was placed in picturesque groupings, and from which the *artistes* gave out most excellent music. The delight which all the visitors expressed at this unexpected *fete* we cannot describe. The scene will retain its beauty by all who saw it, and for years to come will cheer many a wearied Esculapian who recalls it, and thinks of it truly as of the past, yet still as on the book and volume of his brain, fresh as ever and always a joy.—*Social Science Review.*

Visit of the Lord-Lieutenant of Ireland to the Richmond Asylum. — On August 12, the Lord-Lieutenant and suite were present at a *fête* given to the patients in the Richmond Lunatic Asylum. He was received by Lord Meath, Mr. Waldron, M.P., Dr. Lawlor, Resident Medical Superintendent, Drs. Nugent and Hatchell, Inspectors-General of Lunatic Asylums, and other gentlemen connected with the Institution. The company included many ladies of distinction, a number of clergymen, and members of the Medical Profession. The proceedings commenced with the examination of a class of girls by Mr. Sheehan, Inspector of National Schools. They answered very fairly in English grammar, arithmetic, and geography. This was followed by a vocal and instrumental concert, and dancing, the performers being all patients of the Asylum. The Richmond Asylum comprises in its district the county and city of Dublin, with the adjoining counties of Louth and Wicklow. The Institution, which is admirably conducted by Dr. Lawlor and his assistants, contains nearly 700 patients. There is a school, under the National Board, attended by forty-seven men and sixty-seven women, and in a sanitary point of view this sort of occupation has been found most beneficial. Great attention is also paid to the amusement and recreation of the patients in this Asylum. The dietary is good, and the average cost of each inmate is £26 9s. 2d. The Inspectors-General of Lunatic Asylums (Drs. Nugent and Hatchell) give all possible encouragement to the system of amusements, which keeps the patients in good humour, diverts attention from their delusions, renders their management much easier, obviates the necessity of coercion to a large extent, and facilitates recovery.

Accidental Poisoning by Opium.—A lady, the wife of Mr. G. M. Brown, banker, of Liverpool, died on Saturday week last, having swallowed a large quantity of laudanum carelessly dispensed for black draught by Mr. E. Pearson, druggist, of Park-road. At the inquest the evidence proved that Mrs. Brown had prescribed for herself a blue pill and black draught. She took the pill on Thursday, and on the following morning the draught. She complained of the taste and smell of the draught, and asked, "Is it possible I have been poisoned?" Her husband laughed off the idea. She was left alone during the greater part of the day on Friday, the servants who occasionally visited her room finding her asleep. At seven o'clock in the evening, however, they were alarmed by observing her countenance livid, and her breathing laborious. Medical advice was obtained. Mr. Hamilton, the Surgeon who was sent for, gave evidence that he had been called between 7 and 8 o'clock on Friday night to attend the deceased. He found her livid in the countenance, breathing irregularly, with froth at her mouth, and in a profuse perspiration. He tried to rouse her, but she was perfectly insensible. The pupils of her eyes were contracted and her limbs drawn up, but without any twitching. He turned her, with a view to alleviate the symptoms, and the lividity of the countenance disappeared to a considerable extent. He tried to administer a little brandy and water, but the deceased could not swallow it. He had a consultation with Mr. Stubbs and Mr. Long, who were called in soon after him, and they did not think it advisable to apply the stomach-pump, because her breathing was so irregular that the introduction of the tube might produce suffocation, and also because so long after taking a narcotic it would be useless. Dr. Edwards proved that there was opium in the contents of the stomach which he had examined. The butler who had purchased the pill and draught for his mistress stated that when he went to Mr. Pearson's he found that the shop was in course of being papered and painted, and that there seemed to be a considerable amount of confusion in its arrangements. The coroner's jury, after a consultation, returned a verdict "That the deceased died from the effects of opium, carelessly dispensed by Edward Pearson."

The Claims of Medicine on Public Attention.—We extract the following from a very able article, entitled "The Doctors' Congress," in the last number of the *Social Science Review*:—"We may take the late Medical congress at Bristol as a fair type of the figure and thought of medicine as it exists at this moment; we have had it there presented to us voluntarily and openly. The public has not gone out of its way to inquire after the Doctors, but the Doctors have united to show themselves and their science to the public. They have met, argued, and discussed in broad daylight. The press has had free entrance, and scholars of all kinds have found no denial. It is, then, carelessness, and little less than insolent inattention to its own interest, not less than to the Profession, for the intelligent section of the community to stand still outside the pale, making no inquiry as to what has been done, and as to what is promised to be done. Yet how remarkable the apathy! If the bankers of England had held a conference at Bristol, or the stockbrokers, or the insurance companies, or the politicians, what attention they would have secured; how would the London papers have teemed with the sayings and doings of the men who held the great meetings of bankers, or other craft! As it was, some three hundred men, all scholars, met to discuss questions relating to the very existency on which all crafts depend: met to carry on debates, upon the result of which the practical meeting of death in endless disguises, may largely turn: and not one metropolitan paper of an extra-professional kind, except our own, cares to give those proceedings so much as a column of notice. The modern editor, sitting supremely elevated above his own organism, writes on money markets, or cabinet councils, Russian notes, and all else, with power and self-gratulation. 'There is a fine article,' he says to himself, as the printer's devil pushes the manuscript into his pouch: the editor goes home, and is not well, in fact is very ill, and now whether he shall get well or die turns on some one or other of those vital questions which the Esculapians at Bristol have been trying to solve so seriously, and which he has been determined to ignore so resolutely. What is the money market, or any political brawl to this man now as matter of value, compared with positive knowledge in respect to the mode in which he shall be guided to life or to death? We shall say, nothing. Still, he will accept the risk blindly, and if he should recover, will be again at the money question, without even troubling himself to ask why he did not die."

The Annual Report of the Metropolitan Association of Medical Officers of Health for the session 1862-3, says that the work of the Association during the past session has not only had reference to subjects of direct local interest to metropolitan officers of health, but has embraced the consideration of several wide social questions, and has been directed to the elucidation of some general hygienic problems of great importance The chief matters of immediate metropolitan interest were, 1st. The licensing of cowhouses under the provisions of the "Metropolis Local Management Amendment Act." 2ndly. The sanitary inspection of bakehouses in London, legislative supervision of such establishments being advocated of the kind that has since been provided by the

"'Bakehouses Regulation Act." 3rdly. An outbreak of cholera in the Norwood parochial school, upon which a paper was read by Dr. Gavin Milroy, honorary member of the Association. 4thly. The scheme of the Metropolitan Board of Works, for discharging into the Thames, at Fulham, the deodorised sewage of the western end of the metropolis. Upon this subject a memorial was presented to the Metropolitan Board, and a deputation of the Association had an interview with that body, with the effect of obtaining a revision of the scheme, and its ultimate abandonment. 5thly. The presence of epidemic small-pox in London has engaged the anxious attention of the Association. A circular has been addressed to the boards of guardians of the metropolitan unions, urging the necessity for increased Hospital accommodation for cases of small-pox, and suggesting measures to promote the universal vaccination of the community. The desirability of petitioning the Privy Council to apply to the metropolis the provisions of the "Diseases Prevention Act" of 1848 was also taken into full consideration. Upon existing impediments to vaccination a paper was read by Dr. Druitt. A series of subjects of great social importance was submitted to the Association in a paper by Dr. Lankester, on some points in common between the duties of coroner and those of Medical officer of health. Arising out of this paper, the point on which immediate action seemed most desirable was the inefficiency of the present law of registration in ascertaining duly the cause of every death. A sub-committee of the Association is at present engaged in pressing this point upon the Registrar-General, with a view to the amendment of the registration laws. In the course of the year the Association has held communication with the Epidemiological Society concerning a proposition to collect and utilise the statistics of pauper-sickness. The importance of this object has been fully recognised, but it has not yet appeared possible to give practical development to the suggestion.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Sigma.—Watson or Barlow's "Practice of Medicine;" Pickford on "Hygiene;" Scoresby Jackson's "Climatology."

We regret we have not space to notice Mr. Parker's valuable suggestion for the registration of infants affected with deaf mutism.

Dr. C. H. Taylor.—Both Hall and College recognise the Examination of students in Arts at the University of Durham in their second and first years, also the Durham Senior Middle Class Examinations, and Durham Registration Examination for Medical students.

The Glasgow Murder.—Jessie McLachlan has made a semi-confession of guilt to Miss Hislop, Scripture-reader in the General Prison. On Miss Hislop expressing a conviction that she was guilty, she thanked her for her honesty, and then said, "I had as little thought of it half an hour before I left my own house as you have at this moment."

Errata.—Page 174, *for* "'Ο' εγω πεω τον οινον," *read* "'Οτ' εγω πιω τον οινον;" page 172, *for* "Cranby," *read* "Cranley."

An Icelandic Doctor's House.—"The apotheke of Mr. Skaptuson little resembles an English Doctor's laboratory, as there were none of its neat phials and carefully-labelled bottles; instead of these, the room was blocked up with brown jars of purges, pills, and confections, barrels of gums, bundles of simples, old green wine bottles filled with mixtures, jam-pots containing ointments and salves, kegs of boluses, besides shelves of German, Latin, and Dutch Medical treatises of the last century and beginning of the present. The good Doctor has a loft above the kitchen in which his patients are stowed; apparently the kitchen smoke ascends to the Infirmary, and thence escapes through a hole in the roof. The place was in a cloud of the acrid pungent fumes of sheep's dung and peat before each meal; so that I was always made aware of the approach of a repast by the coughing, sneezing, and grunting of the diseased population above stairs."—From *Iceland, its Scenes, etc., by S. Baring Gould.*

Maizena.—Two contrary sets of operations are performed on starch-bearing articles of food. From some it is the practice to extract the starch, or a considerable portion of it, so as to leave chiefly the gluten, and to procure a sort of food presumably adapted to diabetic cases, and to others in which the nitrogenous elements seem to be of the greatest value. Yet the common sense and common practice of mankind has led them—quite independently of any *à priori* or chemical considerations—to extract starch from vegetables which contain it in abundance, and to employ it in the preparation of food for children, for the aged, and for persons whose mucous membranes are irritable, or whose fat-producing powers are below the average. That starch, *per se*, will not maintain life, is, we need scarcely say, no argument against the use of it in conjunction with the fatty and azotised principles contained in eggs, milk, and broth; or in certain cases, and for temporary purposes, with water and sugar, spice or brandy. Of the various kinds of starch, those prepared from Indian corn are deservedly favourites, from their peculiarly agreeable flavour, and from the facility with which they are made into blanc manges, custards, and such other luxuries of the sick room; and amongst these, that which is called *Maizena* has attained a high degree of popularity. We have eaten it in puddings, etc., and have seen it greedily devoured by children, and willingly testify to its agreeable flavour and wholesomeness.

Conflicting Medical Evidence.—Russell v. *The Midland Railway Company.*—The following article appears in the *Birmingham Daily Gazette,* August 18. Can the Profession be surprised at its tone?—

"Who but a British jury shall decide when doctors disagree? The collective wisdom of twelve 'good men and true'—all laymen though they may be—often solves questions upon which scientific men can only agree to differ, and that most widely. A case in point, interesting to every railway traveller, has just been disposed of at Croydon Assizes. Mr. Russell, a traveller in the shoe trade, was riding in a railway carriage on the Midland line between Leicester and Sheffield, when, believing that something was wrong, he tried to open the door of the carriage. Just as he got his arm out for that purpose a collision took place, and he received some injury to his shoulder. To find out the nature and extent of this injury was the object of the jury, for the railway company had paid £100 into court as a sufficient compensation, whereas the plaintiff claimed a larger but unspecified sum. It was pleaded that the injury was permanent, and the Medical explanation was that 'false ligaments' had formed in the limb; but the defence set up was not that the ligaments were false, but that the pretended permanent injury was itself a sham. Of course the case rested mainly upon Medical testimony, and it is curious to note how widely the learned witnesses differed, though the Judge regarded that as a natural consequence of their being ranged on opposite sides. The plaintiff himself said the stiffness of his shoulder prevented him from using his arm in eating, drinking, shaving, or any other ordinary operations of every-day life, and Surgeons from Neath and Swansea deposed that a serious injury had been received. Other Surgeons, called for the defendants, gave evidence to show that the injury was only trivial, and not likely to be permanent in its results; but after these minnows came the Tritons of the Medical craft, and the report before us attempts to accord weight to the testimony in proportion to the experience or social position of the witnesses. Thus we find Mr. Erichsen, '*an* eminent Surgeon' (who believes the inability to use the arm to be genuine, and repudiates the notion of his having been deceived), is supported by Mr Partridge, '*the* distinguished Surgeon,' who added that the patient might recover after a tedious term of suffering; and the two are corroborated by Mr. Jones, 'a Surgeon of long practice in London.' Happily, we are not called upon to define the relative weight of the indefinite and definite articles preceding the adjectival designations of Messrs. Erichsen and Partridge, nor need we bewilder our minds by deliberating whether the palm of credibility should be given to the Surgeon who is 'eminent,' or he who is 'distinguished,' or he who can boast 'a long practice in London.' No doubt they are 'all honourable men,' and conscientiously believed every word they swore to; but the main question is, how does their testimony weigh in the balance against that produced on the other side? In support of the allegation that the plaintiff's injuries were to a great extent simulated, the learned counsel engaged for the railway company called several Surgeons who have no distinctive adjectives prefixed to their names, and then put up Mr. Paget, 'an eminent Surgeon of Leicester,' who had never known serious injury to result from such an accident as the plaintiff had sustained, and did not believe in the permanence of the disability. But the best trump-card of the defence was reserved till last—'the illustrious and venerable Surgeon, Mr. Lawrence, whose evidence was listened to with the utmost attention and interest by every one.' The illustrious and venerable witness had come to the conclusion that when he examined Mr. Russell that gentleman had 'resisted voluntarily;' in other words, that he had imparted fictitious rigidity to the damaged limb. The witness went so far as to say that the plaintiff was 'shamming to a great degree,' and though there was now a genuine stiffness in the arm, it was the result of inaction, and had been brought about, not by the accident, but by the measures taken to exaggerate the importance of the original injury. Here was a perplexing task for a jury: to decide between witnesses eminent, distinguished, and of long metropolitan practice on the one hand; and eminent, illustrious, and venerable on the other. The Judge, too—no doubt with the best intentions—added a further complication to the case by suggesting that as the plaintiff had evidently exaggerated the narative of his pecuniary affairs—(which in mercy we have avoided inflicting upon the reader)—'that might help the jury to decide whether he had exaggerated the bodily injury.' But it did not help them, in the sense in which the hint was obviously thrown out; nor does it appear that the jury troubled themselves with nice calculations as to the relative weight of evidence. They gave the plaintiff another £150, so that he gets £250 compensation in all. This is certainly not a penny too much if he is permanently injured in his dexter arm; and his positive deposition to that effect was not disproved by the speculative opinions of eminent, illustrious, and venerable witnesses on the other side. Substantially, both parties have obtained justice; perhaps the railway company consider they are rather overdosed with the article, and that it is quite possible to have too much, even of a good thing."

A Bristol Editor's Evening amongst the Esculapians.—The following amusing sketch of "Ye manners and customs of modern Esculapians," is published in the *Bristol Times,* and is supposed to have been written by Mr. Leech, the able editor of that paper:—

"What a healthy time two parts of England must have had of it during the last three days, for half the leading Medical men in the country have been in Bristol since Wednesday, leaving their patients the rare opportunity of getting well in their absence. A few short vacations in the year, such as this, by weaning folks from their physic, would do more harm to the Profession than all the homœopathists in the kingdom.

"This is an old joke I know: and as the Bath Physician said to his quizzical patient, 'You will have your joke, but I'll have your guinea;' and so it is. We laugh at the doctor only so long as we do not want him, but as I shall have some day next week to be overhauled by one of the Profession for a handsome policy, if it were only for this I'll speak well of the faculty. And the President, with keen worldly wisdom, cleverly hit the right nail on the head, when he referred, in his opening address, to the millions invested in Life Insurance Offices, which consider no business safely done that does not first pass through the doctor's hands.

"But to return to the *conversazione* at the Institution—for it was there I spent my evening amongst the doctors. Just as I entered the building, an inveterate punster seized me by the button-hole, and, pointing round to the statuary which ornament the vestibule, said, 'No doubt the Venus de *Medicine* is amongst these casts.' I have not had time to look out in my common-place book for this *bon mot*, but it strikes me as an old acquaintance, and I'll see for it when I have a little leisure, and, 'when found make a note of it.'

"Medicine has no class type in the faces of its professors; in a conference of clergy, or even lawyers, the clerical or legal habit appears to stamp itself on the countenances of the company. But amongst the Medical Practitioners there is a variety of dress and expression that gives you the idea that you have merely found your way into a congregation of intelligent and agreeable men of the world. Nor was there anything, so far as I heard, in the conversation of the numerous groups through which you passed, that was strictly Professional. Indeed, it seemed as if men had come from the four quarters of England merely to make or renew acquaintances. 'How do you do?' exclaims one man, accosting another. 'Very well,' replies the party addressed, 'I'm sure I must know you, but——' 'You don't,' vivaciously strikes in the other; 'and not so very surprising either, since we were at Saint Bartholomew's together in the winter of —.' 'Smith!' exclaims the other, with a frank recognition and hearty shake of their hands, 'how are you, and where have you been located for these last twenty years?' Smith: 'Oh, tumbled on my legs into so and so.' Brown: 'Doing well, I hope?' Smith: 'Yes; but hard work. And where are you?' Brown: 'At ——, and no reason to complain.'

"These, perhaps, were two grey-headed, jolly, more than middle-aged men. Others, mayhap, had more varied notes to compare. One man was in luck, and fell into a fine-paying fashionable practice; while another, perhaps his compeer student at Guy's, with as much promise when they were walking the Hospitals together, was only a poor Poor-law Doctor, breaking his own heart and his horse's knees in riding to two-and-ninepenny pauper patients. In every case, however, I noticed men were delighted to renew old acquaintances. They seem to become young again in referring to their old London days, when, like Falstaff, they 'heard the chimes by midnight.' They were like Jack and his Eleven Brothers meeting at the Cross Roads again after a long absence, and having very different stories of Fortune's pranks or favours in the interval to tell, but still glad to meet.

"And this, I think, is amongst the most valuable opportunities which the Annual Conference affords Old lawyer friends meet in London at the courts again and again; but between the old Surgical acquaintance in Carlisle and the old Surgical acquaintance in Exeter there is usually some 'lady in the case' to prevent a mutual meeting, lest the husband may be ringing the night-bell during the temporary absence of the family Doctor. There is, however, a half-professional excuse for this yearly holiday of the British Medical Association, and a man always idles with more conscientious ease when he thinks he has a business plea for doing so.

"Relaxation was certainly the rule of the night at the Institution. The only thing Professional I noticed, beyond a few hideous morbid specimens under microscopes—which make laymen very uncomfortable, and serve as a sort of bugaboo for the Profession—was one gentleman who devoted two hours to an exhibition of the 'vocal chords,' thrusting a small looking-glass down his throat, and making a series of unmusical sounds for a succession of brother-Professionals, who looked down his throat with as much interest as though they wanted to see what he had had for dinner.

"And dinner being somewhat *à propos* to supper, I may be pardoned for observing that I never saw people eat with so great a contempt for the nightmare as did the Professional part of the company on the occasion. Mr. Phillips having amused them for a while with his beautiful demonstrations of the electric light, said that he should be happy, if they desired it, to show them other experiments; but at the same moment the hon. secretary rose, and with something of covert humour, and in good Scotch, told them supper was ready. Hey, presto! the room was clear in a minute, the company were all off, 'leaving the world to darkness' and the man of light.

"'Whatever you do, never eat supper,' has been the invariable injunction of all the Medical men I have had since I cut my teeth; but here was a practical illustration of a 'Medical dietary table.' Everything you could conceive unwholesome to retire to bed upon, from lobster-salad to pork-pie, was swept down before the repeated charges of these dyspepsia-defying lancers. I jogged the elbow of my Medical attendant just as he went in for a third helping of raised pie, half a plateful of which would have made me dream that I had the Observatory on, or a plesiosaurus in, my stomach—'Pray remember the poor inside,' I said. 'See if you can't reach that decanter of sherry for me,' he merely replied, with his mouth half full. I retired in despondency. I had gone specially to see how these Hygienian sages managed their own regimen, and I found them feeding like ostriches. I therefore put down that, as 'grocers (proverbially) don't eat figs,' Physicians do not take physic; nature has therefore full play and power with them."

PLACENTA PRÆVIA—REMOVAL OF PLACENTA BEFORE DELIVERY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I send you the following case, thinking you may consider it worth insertion in the *Medical Times*:—

Shortly before 2 p.m., August 9, I was requested to see Mrs. P., who, I was told, was flooding dreadfully. On my arrival, I found the bed-room floor absolutely covered with blood. The patient was 41 years of age, had had seven children and one abortion; was last unwell January 2, and considered herself about seven months pregnant. Six weeks ago she had a slight "show," but nothing more until an hour before I saw her.

On examination, I found a small portion of placenta in the vagina, the remainder being applied to sides and front of os, which was dilated to the size of a 5s. piece, very firm, the head pressing on it, no pains, and flooding profusely. I endeavoured to gain time by plugging, but it was useless; I removed the plug, and introduced my hand into the vagina, but found it utterly impossible to turn; there was no time for craniotomy (even if applicable) as I believe she would have died in twenty minutes if the hæmorrhage was not stopped. I therefore removed the placenta. The bleeding ceased instantly, and I left nature to finish the work, turning my attention to the general condition of the patient. She was nearly pulseless, very restless, etc. I supplied her with stimulants freely, and presently with beef tea. At three the pains recommenced, and soon became tolerably frequent, and at four she expelled a male fœtus, and seemed almost as comfortable as if she had not nearly bled to death. She is now rapidly recovering. I am, &c.

8, Norton-street, Liverpool, August 18. D. M. WILLIAMS, M.D.

ILL-SMELLING FEET.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Your correspondent G. H. R., who wishes for a remedy for "ill-smelling feet," may like to know that a tolerably strong solution of tartaric acid has been advised by an eminent authority as a very useful application. It should be applied thoroughly between the toes, etc.

I am, &c. AN OLD STUDENT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In reply to your querist, "G. H. R.," by attention to utter cleanliness, filing the nails, putting the feet in soda and water nightly, and in the morning soaking them in a strong decoction of birch bark (*Betul. alb.*), the feet will in time become positively pleasant. Let him ask "his Medico" if there be gouty, rheumatic, or syphilitic cause; if not, let him rely on the remedy. The requisition is very vaguely put. I am, &c.

M.R.C.S., L.S.A.

COMMUNICATIONS have been received from—

DR. J. FAYRER; APOTHECARIES' HALL; Professor T. LONGMORE, B.A.; REGISTRAR GENERAL, EDINBURGH; DR. ROBERT WALKER; DR. D. M. WILLIAMS; MR. JAMES ROBERTSON; MR. W. PARKER; MR. REGINALD HARRISON; DR. W. GAYTON; MR. C. H. TAYLOR; MR. J. C. STEELE; DR. T. B. MORIARTY; MR. RAWDON; SIGMA; MR. E. JOHNSON; MR. W. J. CLARKE; R. W. FITZPATRICK, Esq.; MR. D. MACKECHNIE; AN OLD STUDENT; UNIVERSITY OF LONDON.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 15, 1863.

BIRTHS.

Births of Boys, 979; Girls, 930; Total, 1909.
Average of 10 corresponding weeks, 1853-62, 1642·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	704	616	1320
Average of the ten years 1858–62	612·5	601·1	1213·6
Average corrected to increased population..	..	..	1256
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	10	8	7	1	5	2	34
North ..	618,210	13	2	31	4	6	9	49
Central ..	378,058	8	3	21	6	5	8	21
East	571,158	5	1	37	5	2	18	42
South ..	773,175	9	9	22	6	5	16	49
Total.. ..	2,803,989	45	18	118	22	23	53	195

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·851 in.
Mean temperature	65·1°
Highest point of thermometer	84·9
Lowest point of thermometer	50·1
Mean dew-point temperature	55·1
General direction of wind	S.W.
Whole amount of rain in the week	0·00 in.

APPOINTMENTS FOR THE WEEK.

August 22. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

24. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

25. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

26. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

27. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

28. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

◆

MALIGNANT DISEASES OF THE EYE.

BEING SELECTIONS FROM A COURSE OF LECTURES ON DISEASES OF THE EYE.

By HAYNES WALTON,

Surgeon to the Central London Ophthalmic Hospital, and to St. Mary's Hospital; late Teacher of Anatomy and Demonstrator of the Surgical Operations in St. Mary's Medical School.

Medullary Cancer of the Eyeball—Treatment.

The eye itself, or the orbit, may be the seat of nearly all the forms of cancer. So far as morbid anatomy helps us, we are enabled to divide cancer into four great varieties—medullary or encephaloid (under which are included melanoid and hæmatoid), scirrhus, colloid, and epithelial. With these may be considered as malignant diseases, though not possessing all the characteristics of well-marked cancer, recurrent fibroid and myeloid tumours.

These forms do not occur in or around the eye with equal frequency. Colloid cancer has never yet been found in the eye or the orbit. Scirrhus is exceedingly rare as an affection either of the eyeball or its appendages. Epithelial cancer attacks only the eyelids or the conjunctiva. Recurrent fibroid disease has been met with as intra-orbital tumour in one instance only that has come to my knowledge. Myeloid tumour is here mentioned, chiefly because of the occasional implication of the orbit in its extension from other parts. Medullary cancer, in the form of encephaloid or melanosis, may attack either the eye or orbit, and it is the one or the other variety, more particularly the former, which is present in the great majority of cases.

Medullary cancer therefore claims the greatest share of my attention. I shall not, however, review the general characters of the disease, a careful description of which may be found in my work on the surgical diseases of the eye, but merely treat the subject practically as connected with the eye. As an affection of the eyeball it has been occasionally met with in middle life and in elderly persons, though so rarely that the fact has been questioned by some writers. Several instances, however, are on record, which prove the possibility of its occurrence; one in particular is mentioned by Mr. Saunders, where the examination of the eye after extirpation, and still more, the formation of secondary tumours in various parts of the body, leave no room for doubt as to the nature of the disease. Besides this, several specimens in the Museum of the Royal College of Surgeons render the fact unquestionable. It is equally certain that, in the vast majority of instances, the period of its appearance is in early childhood, generally before the fifth year, and rarely after the tenth. I have seen it in infancy. It has been noticed at birth, even far advanced, but the mass of cases will be found to have occurred in children from two to four years of age. It is usually confined to one eye, but occasionally attacks both, either consecutively or simultaneously. I shall, to facilitate description, divide the affection into three stages.

First Stage.—The earliest symptom that generally attracts attention is a shining, yellowish, and deep-seated reflection at the bottom of the eye, as if from a piece of metal; this is best seen in particular lights, and somewhat resembles the appearance of a cat's eye in a darkened room. At the same time the iris will be found to have changed in colour, being rather darker than that of the other eye; the pupil is dilated and sluggish, and vision, even now, is nearly or altogether lost. Slight external inflammation, lachrymation, and intolerance of light occur in some instances; but these are by no means necessarily, or even frequently, present; more usually there are no indications of pain, and there is every appearance of perfect general health. As the disease advances, the cause of the metallic reflection becomes evident. It is now seen to be owing to a tumour, springing up, apparently, from the fundus of the eye, of an irregularly rounded form, generally divided superficially into two or three lobes, and traversed by one or two small blood-vessels, which ramify on its surface.

In colour it varies from a deep orange hue to nearly white; the most usual being, perhaps, a bright canary yellow. The growth gradually increases in size, approaches the front of the eye, causing absorption of the vitreous humour, and affects the lens, which become opaque, and in most instances is ultimately absorbed; previous to which it is pressed on the iris, which loses whatever brilliancy it may have retained, changes to a greyish brown colour, and is thrust forwards against the cornea, both the anterior and posterior chambers of the eye being completely abolished. Towards the conclusion of this stage there is considerable tension from the internal pressure; the eyeball feels hard, its motions are limited, there are attacks of external inflammation with epiphora, and frequent and severe paroxysms of pain, restlessness, fever, and emaciation.

Second Stage.—The external parts of the eye now undergo a change. The cornea expands and becomes opaque. The sclerotica, thinned by absorption, allows the choroid to appear through it, is irregular in outline, rising into small, dark-coloured knobs where the pressure has been most severe or the absorption most rapid. In many instances it is so densely covered with large varicose vessels that no alteration in colour is perceptible. The eyelids now become œdematous, and the eyeball prominent, greatly enlarged in size, and apparently more so through the prominence from the swelling of the orbital tissues, thus giving it the appearance of being augmented in bulk. Rupture of the eyeball next ensues, and this may take place either in front or laterally. In the former case, the cornea becomes more and more attenuated, pus or lymph is effused into its structure, and ulceration or sloughing ensues. These changes are not witnessed in the sclerotica, the fibres of which, previously thinned and opened up by long-continued distension, finally give way in a small rent, through which the morbid mass, still covered by the conjunctiva, protrudes. During the latter part of this stage the sufferings of the patient are acute, the pain extending over the whole side of the head, and even down the neck, and is accompanied with the usual symptoms of febrile excitement. Great relief is experienced when the fungus escapes and the distension is removed.

Third Stage.—The tumour, now released from pressure, rapidly increases in bulk, so as in a short time to distend the orbit and eyelids, and efface all appearance of the eye. When it has escaped through the sclerotica, at some little distance from the cornea, it is at first covered by the conjunctiva, but this is finally destroyed by ulceration and sloughing. In other cases of less frequent occurrence, the sclerotica gives way at the back part of the eye, so that the fungus escapes directly into the orbit. Under such circumstances the eyeball will be displaced in various directions, according to the position of the protruded mass, until finally this latter has acquired sufficient bulk to extend beyond the margin of the orbit, when it overlaps and conceals any remains of the eyeball that may have been visible.

The fungus, on its first escape, is soft, and generally of a light red or yellowish colour. This appearance, however, is rapidly changed as it increases in bulk; the surface becomes irregular and covered with ulcerations, which discharge profusely; large, livid, and fungoid granulations form, which bleed freely on the slightest touch; interstitial hæmorrhage takes place, forming clots in the interior of the growth, while large masses are detached from its surface by sloughing, giving rise to fresh bleeding, in some instances so profuse as to prove the immediate cause of death. No diminution of the size of the tumour ensues from the separation of the sloughs; on the contrary, the growth seems to take place with increased vigour, and is limited only by the length of time that the patient survives. The glands in the neck and under the lower jaw enlarge, and, in exceptional cases, proceed to ulceration. Death finally ensues, in some instances from extension of the disease to the brain, when it is preceded by coma or convulsions; in others from constitutional irritation, and the exhausting effects of pain, hæmorrhage, and discharge.

Much discussion has arisen as to the particular tissue of the eye which is the primary seat of the cancerous deposit. This is a question which it is very difficult to determine by post-mortem examination, as we seldom have an opportunity of making a dissection till the disease has so progressed as to involve all the tunics, and in an especial manner the retina, which, from the delicacy and great vascularity of its structure, is peculiarly unfitted to withstand either the extension of the disease, or the effect of pressure. The uniform manner in which the tumour appears to spring from the fundus of the eye, and the constancy with which the nervous structures have been found on dissection to be to a greater or less extent involved, have led to the opinion that the disease has its origin in the optic nerve, just as it begins to expand into the retina, or into the latter tunic, close to the nerve.

This point of origin has been much discussed from specimens that have been examined by the several writers, and of course opinions have been formed according to their opportunities for observation.

But while these examples are sufficient to show that soft cancer may originate in any of the tissues of the eye, not even excepting the cornea, a careful examination of the preparations in the Museum, together with my own dissections, has led me to the conclusion that, for the most part, the retina is its primary seat; and the implication of the optic nerve, even within the cranium, which is constantly present in advanced stages of the disease, or in recurrence after extirpation, is evidence of a special determination to the nervous structures.

From the striking appearances exhibited by encephaloid from the very commencement, its diagnosis might be thought to be an easy matter. Such, however, is not the case. There is no disease as to the nature of which mistakes are more constantly made, and I shall endeavour to show that a positive diagnosis is, in the present state of our knowledge, totally impracticable until the fungus has protruded through the external coats of the eye. The opacity of the lens, occasioned by the pressure of the tumour, has been mistaken for idiopathic cataract, and attempts have even been made to perform the operation for depression.

The colour of the vitreous humour may be altered in various ways, giving a dull red or yellowish appearance to the pupil, which might at first sight cause some embarrassment. The most ordinary cause of this discoloration is effusion of blood into the hyaloid cells; this may be almost invariably traced to the effect of a blow, or of some violent muscular exertion; it occurs suddenly, the blood is readily absorbed, and it seldom produces any very serious symptoms. A deposit of lymph on the surface of the retina, from traumatic inflammation, occasions a yellowish reflection through the pupil; but the history of the case will sufficiently indicate the nature of the disease, while the indefinite and unchanging appearance of the discoloration, and the absence of anything like a tumour gradually advancing to the front of the eye, will assist still farther in forming a correct diagnosis.. Attentive observation of the progress of these affections, and careful inquiry into their history, will seldom leave much doubt as to their real nature. It is far otherwise, however, with deposit of inflammatory exudation or scrofulous matter in the interior of the eye, occurring either spontaneously or as the result of injury, which may assume an appearance so exactly similar to that which was formerly considered as peculiar to malignant disease, as to render the diagnosis, in most instances of its occurrence, absolutely impracticable.

The true nature of these cases seems to have been first clearly pointed out by Mr. Travers. In several instances of what appeared to be malignant disease, as indicated by permanently-dilated pupil, with a deap-seated opacity of a splendid yellow tint, the healthy appearance of the children induced him to abstain from operating, when he found, to his surprise, that the disease remained stationary for years, unaccompanied by any disorder of the health. Subsequent observation induced him to express the opinion that the "peculiar tint and splendour of the opaque substance is not to be depended on as a sign of malignity."

Subsequent practice proved the truth of this. Lawrence, Tyrrell, Mackenzie, Delrymple, and other men who have contributed largely to advance ophthalmology, came to the same conclusion, and all of them admit mistakes that they had made.

It has been asserted that in the non-malignant disease the metallic lustre is not so brilliant, and the colour not so deep; that the iris and lens remain unchanged; that the globe becomes atropic without previous enlargement; that the tumour never proceeds so far as to rupture the coats of the eye and escape externally. These and all other attempts which have hitherto been made to establish diagnostic marks have failed, their accuracy having been disproved by an appeal to recorded cases. I am not aware that ophthalmoscopic investigation affords assistance by dispelling doubt. It has been stated that the arrangement of the blood-vessels in each is different. I am sure that no such distinction can be depended on.

The very responsible question of treatment is next to be considered. What is to be done when a patient is brought to us with supposed medullary cancer? It is certain that if the suspected disease be present it will increase, and no general treatment can be available. Are we to operate? It is equally certain that no cure is to be found in removing the eyeball. The invariable result of such attempts has been recurrence of the disease locally, and these are always tumours of the brain or other vital organs, generally called secondary, but frequently incorrectly so. From all that I have seen, and most certainly when the optic nerve is involved, I fully believe that death has occurred sooner than if the disease had been left to run its course. There is not an unequivocal case of recovery on record. The hasty reports given in the journals a week or two after the operations as "successful operations for soft cancer of the eyeball—extirpation for cancer—cure," and so forth, tend greatly to mislead the Medical public.

I am not now, be it remembered, discussing the question of operating for malignant affections in general; for I must say that in some—hard cancer for instance—I fully believe that under certain restrictions life is prolonged by it, that a part of the term to be lived is passed through with less suffering, and that hope, rather than despair, prevails. It is medullary cancer only of the eyeball that I am considering. I know that some Surgeons do operate. In cases in which I have refused to interfere, extirpation has been done, and success promised. Not long since, in consultation, a letter was produced from a Surgeon in large ophthalmic practice, in which was expressed his opinion on the necessity for operating. "Indeed," said he, "as the disease is decidedly malignant (a point that was by no means certain to my mind) there is no time to be lost." I was obliged to differ, but the eye was, I believe, extirpated. I must not forget to mention that often, when the ocular disease seems but slight, there is cancerous implication of the brain.

The same general observations apply to the rarer instances in which the disease appears in the adult; for, though it may not always be so rapid in its progress, it has hitherto been found to be equally fatal in its results, and beyond the control of operative Surgery. In either period careful and well-regulated treatment has frequently been found to effect much towards the alleviation of the more distressing symptoms and the prolongation of life. On the other hand, it cannot be too carefully kept in mind that irritating applications, by which the afflux of blood to the part is increased, as well as every debilitating cause which tends to impair the general health of the patient, adds renewed energy to the vegetating force of the morbid mass, and accelerates death.

Under some circumstances of doubt an operation is assuredly called for. For instance, when a patient is seen with an eye either malignant or scrofulous, or something else about which there can be no certainty, but vision is destroyed, and there is much local suffering, that nothing else will reduce, or where it is clear that the sound eye shows any of the symptoms of sympathetic inflammation. The suspicion of malignancy therefore, however strong, should not deter us from doing that which is at all likely to benefit a patient, and putting into execution that which only should be withheld as a rule when the ravages of cancer are progressing.

Petroleum as a Dressing for Wounds. — An American paper, the *Missouri Democrat*, contains an extract from a letter written by an Assistant-Surgeon at Gettysburg, which strongly recommends petroleum as a dressing for suppurating wounds. We can readily imagine that it would answer the purposes of excluding air and impurities, and forming an unirritating covering for a granulating surface. The writer says:—"Will you allow me, as one alleviation of the horrors of the battlefield, to call your attention to the use of coal oil in suppurating wounds? As volunteer assistant, I received permission from the Surgeons of the First Division of the Fifth Corps, Gettysburg, to use it in the most offensive cases. By its manifest utility, and the solicitations of the wounded, I was induced to enlarge its use, until I became satisfied that what cold water is to a wound in its inflamed state, coal oil is to it in its suppurating state, dispelling flies, expelling vermin, sweetening the wound, and promoting healthy granulations. It can be used by an assistant of ordinary judgment with perfect safety, and to the great comfort of the patient. I have seen two patients whose wounds had been dressed with it asleep before I was through with the third."

ORIGINAL COMMUNICATIONS.

A DIFFICULT AND RARE CASE BEARING ON THE QUESTION OF OVARIOTOMY.

By W. T. GAIRDNER,

Professor of Practice of Physic in the University of Glasgow.

I AM led to request the attenion of your readers to the following abstract of facts relating to a case now in the Royal Infirmary of Glasgow, believing that it presents a very rare example, either of conjoined ovarian and uterine disease, or of such disease of the uterus as very closely simulates the characters of an ovarian tumour. I have a further object in publishing these facts in what may be deemed a very imperfect shape—that the publication of them may possibly give rise to some useful suggestion from one or other of the leading authorities on ovariotomy, as to the chances of relief by operation in the event of the hæmorrhage proving, as seems not unlikely, immediately dangerous to life. I am already in possession of a most valuable and instructive communication from Mr. Spencer Wells on the subject, of which (as it is not sent me with a direct view to publication) I will only say at present that it contains a clear and exhaustive statement of the experience of that eminent Surgeon bearing on the question. It is evident, however, that in cases of this very peculiar and exceptional character the practical experience of any one man may chance to outweigh that of others apparently even more favourably placed; and accordingly it has appeared to me that the best manner of doing justice to my patient's case is to place a brief record of it before the Profession. I will add that although I have availed myself of the assistance of several of my colleagues and professional friends in examining the case, no formal consultation has as yet been held, and I am therefore singly responsible for the facts and opinions embraced in the following statement:—

Mrs. R., aged 45, a widow for the last thirteen years, previously to which she had five living children and one miscarriage, has been sensible for at least four years past of a tumour in the lower part of the abdomen, which, when she first observed it, was perhaps as large as a handball to the feel, and seemed to incline to the left side, arising out of the iliac region; although she also states that, had her husband been alive, she might possibly have suspected herself of being pregnant. The tumour is now nearly of the size and form of the pregnant uterus near the full term, still, however, with an inclination to the left side when she sits up; it lies in front of the intestines, but has tympanitic percussion above and at both sides; it is free from nodules or marked irregularities, elastic, but not distinctly fluctuating, and as mobile as can be expected from its size. It is not the seat of any well-marked painful sensation, and can be handled freely without much uneasiness. She has sometimes fancied she had sensations of movement in the tumour, more or less resembling quickening; but this she only states in answer to a leading question. It is hardly necessary to say that there are none of the usual evidences of pregnancy.

Examined *per vaginam*, the uterus is rather high in the pelvis; the os uteri is somewhat more open than usual, but otherwise natural. The shape of the cervix is not indicative of general enlargement; the cavity, however, is elongated by at least an inch, and the uterine sound passed to this extent can be moved freely about, apparently independently of the tumour. Pressure made from above on the tumour is communicated rather obscurely to the finger at the os uteri; and it is impossible to ascertain positively any well-marked organic connexion between the tumour and the uterus.

In addition to the symptoms more directly connected with the tumour, the patient has been for several years subject to uterine hæmorrhage, which, during the period of growth of the tumour, and even before it was observed, occasionally took the form of severe floodings, in which much clotted blood came away. Owing to these hæmorrhages, she is much blanched, and has a sallow cachectic appearance. It is difficult to say how long the discharges of blood have existed, for on recollection she is inclined to think that ever since her husband died (thirteen years ago) the menstruation has been too copious, and the first approaches of flooding usually took place at the close of the menstrual periods. Latterly, the floodings have been quite irregular and unexpected, but the menstruation continued, with remarkable regularity on the whole, long after the hæmorrhages began. She has also had leucorrhœa more or less almost all her life, and this, too, has increased since she has ceased to bear children.

On being particularly questioned, patient remarks upon a fall she had about five years ago as being possibly a cause of her complaint. The fall was upon the lower part of her back, when she was carrying a pitcher on each arm, and it caused great pain, laying her up for about a fortnight. She is disposed to think that her health has never been so good since. She remembers also a strain or injury shortly after the birth of her second child, which she connects with a tendency to what she supposes a falling down of the womb. In regard to this, however, it is certain, from observations made since admission, that she is mistaken. There is no prolapsus uteri, nor any tendency to downward displacement.

In this case the points that appear to me to demand attention are—1. Is the tumour uterine or ovarian? 2. If ovarian, is the hæmorrhage connected directly with the tumour, and would it be controlled by removal of the diseased ovary? or, 3. Is the hæmorrhage purely uterine, the tumour being ovarian, and in this case what would be the effect of ovariotomy upon the hæmorrhage? or, 4. Are both the tumour and the hæmorrhage of uterine origin, the tumour being in this case necessarily more or less pediculated and detached from the body of the organ? and, 5. In this last view, can Surgery afford any relief with reasonable prospect of a successful result in case of urgency?

Desiring to elicit the results of experience as bearing on these points, I will refrain in the meantime from stating the course of my own speculations; and as the life of this poor woman may at any time be hanging in the balance, I would respectfully solicit the immediate communication of any facts tending to illustrate either the diagnosis or treatment of this obscure case.

ON A NEW MODE OF SECURING THE HANDLES OF THE FORCEPS DURING DELIVERY.

By W. GAYTON, L.R.C.P. Edin. (Exam.)

Fellow of the Obstetrical Society.

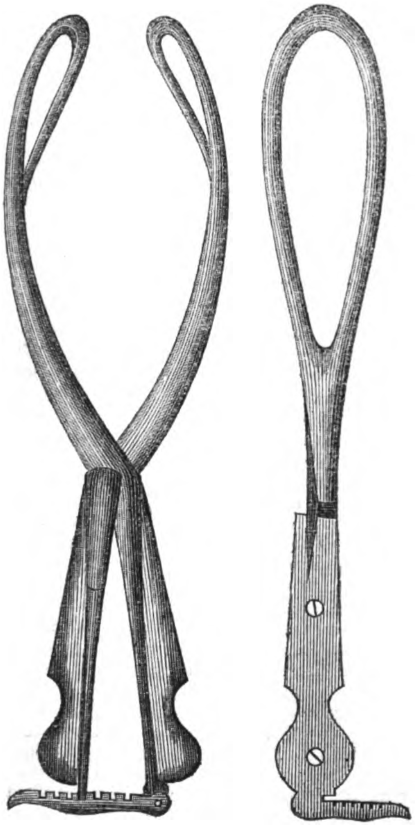
THE Profession is respectfully directed to the following remarks on "a new mode of securing the handles of the forceps during delivery." The plan of applying a ligature is so general that it may at first sight appear to be superfluous to occupy attention on such a point. When, however, from statistics it appears (a) that out of 296, 64 children are lost, or about 1 in 4½, it is, I think, a duty incumbent upon us if possible to lessen so great a mortality. The practice of applying a tape around the handles was inculcated by Smellie, Denman, Blundell, and other authors of a more recent date. At page 393 of Denman's work on midwifery he says, "When the forceps are locked it will be found convenient to tie the handles together with sufficient firmness to prevent them from sliding or changing their position, *but not in such a manner as to increase the compression on the head of the child.*" Ramsbotham, again, writes,(b) "In most of Smellie's plates the handles are tied together by a tape, and this practice is still adopted by many," but "*the child's head must be relieved from pressure during the interval of action by opening the lock,*" *because if the pressure be continued uninterruptedly the child's head must be placed in great jeopardy.*" For this reason therefore he disapproves of the practice. Blundell says,(c) "When the lock is completed you may if you please tie the handles together by means of a riband, *taking care not to draw the ligature too closely, lest you should occasion the blades forcibly to grasp the cranium so as to compress the brain and kill.*" If some means could be devised whereby both these purposes could be accomplished, viz., firm adaptation without too great compression, the value of the instrument would, I thought, be greatly enhanced. It is on this account that I have ventured to bring before my Medical brethren the improvement I have adopted. The operation of tying and untying a ligature is associated with so much trouble that the practice is undoubtedly neglected; the consequence is, that the blades are kept firmly compressed against the fœtal head during the whole time of extraction, and this is, unless I am mistaken, the solution to the problem with regard to the excessive infant mortality during delivery by this instrument. If, on the contrary, the hand is used instead of a ligature, the power applied during manipulation is divided, part being used to keep the handles approximated, and part being expended on the extraction; the hand in this way becomes fatigued, and delivery is probably retarded.

(a) F. Churchill's "Researches on Operative Midwifery," p. 134.

(b) Ramsbotham's "Principles and Practice of Obstetric Medicine and Surgery," p. 273.

(c) See Blundell's "Principles," by Severn, p. 328.

The instrument, it will be seen, differs in no way from that in general use, except at the extremity of each handle and in the lock,—the latter is an improvement by the maker (Krohne, of Whitechapel-road). My addition simply consists of a means of junction on the old rack and spring principle: on the one handle the rack and spring is placed, the other is flattened and tapered so as to be received into the furrows made for it. When the blades are applied, and the instrument locked, it may be kept at any degree of compression by simply raising the spring and allowing the end of the handle to advance or recede as desired. In this way, during the interval of pain, the pressure is in a moment taken off the fœtal head, and as quickly replaced; nor do I believe does the addition in any material way interfere with the action of the instrument, especially if the rack be kept downwards. The diagrams will, however, sufficiently explain themselves.



The value of any instrument is only proved by oft and repeated trials. In my own hands it has proved successful, and I can confidently await the verdict of a wider experience. The main object of the inventor was to provide a suitable means of uniting the forceps when applied, without the incumbrance of ligatures (which are not always at hand), and if possible to lessen infant mortality. One or other of these objects being answered, the object has been attained; and I trust another addition has been made to obstetric art.

Brick-lane, August.

CASES OF EPILEPSY, CONVULSIONS, GIDDINESS, ETC.

PART OF A SERIES ILLUSTRATING AFFECTIONS OF THE NERVOUS SYSTEM, OF ORGANIC AND INORGANIC ORIGIN, WITH CLINICAL AND PATHOLOGICAL OBSERVATIONS.

By JOHN W. OGLE, M.D., F.R.C.P.

Assistant-Physician to, and Lecturer on Medical Pathology at, St. George's Hospital.

(Continued from page 114.)

Case 27.—In the early part of last year Mr. C. Pollard, of Brompton, requested me to see an infant in consultation with him under the following circumstances:—The mother, aged 31 years, of a nervous and excitable temperament (I use Mr. Pollard's words as regards these details), was confined of her third child after a natural labour. This, which was the first male child born, she determined to bring up by hand, as she had in each former case suffered so much from mammary abscess, that she was prevented suckling beyond six weeks. Both the mother and the infant progressed most favourably during the first week, the latter being fed upon milk and water. In a day or two afterwards it was, however, noticed that the child's tongue protruded, was larger and thicker than natural, and also much discoloured. At the end of a week after this Mr. Pollard was summoned to the child, and informed that it had been "very much convulsed." As the alvine secretions appeared to be in an unnatural state, some slight aperient medicine was given, which brought away several hard feculent masses; still the convulsions continued, and occasional aperients with alkalies were given, but with no good results; nevertheless, the patient gained flesh, and looked well in the face during the intervals between the convulsions. At the end of the seventh day from their commencement, the "fits" entirely and suddenly ceased, and the patient remained free from them for another seven days, when they recurred with increased violence, and, "as the infant was scarcely ten minutes, day or night, free from them," Mr. Pollard said he "had frequent opportunities of noticing their character, and had not the least doubt whatever they were truly epileptic, being accompanied by foaming at the mouth, the tongue hanging out, the eyes thrown up, the hands and feet clenched, and the face violently contorted." Hot baths and mustard poultices to the neck and legs were resorted to, and alkalies, aperients, and sedatives were given without any favourable result whatever. The child still took its nourishment between the attacks, and looked well, and the secretions from the bowels were perfectly healthy to all appearance.

The previous child of the mother having cut two teeth when only three weeks old, it was at first thought that possibly the symptoms in this case might be owing to dental irritation, but no indications of the kind were afforded by the gums. Mr. Pollard then recommended that a wet-nurse should be had, and as objections on the part of the child's friends were offered to this suggestion, requested me to meet him in consultation. I did so, and this was when the child was three weeks and five days old (two weeks only of which had been free from convulsions, night and day), and remained in the child's presence nearly half an hour. The appearance of the child at this time was not unhealthy, but I had not been in the room above a few minutes when it began to have convulsive twitches of the hands and feet. Presently the limbs became rigid, the neck stiffened, and the hands twisted forcibly on one side; the muscles of the face and the eyelids became much distorted, the eyes turned up, and the colour of the face and neck gradually heightened until it passed through bright scarlet into a darker and deeper one, and, finally, a very dark, almost livid colour. Gradually, then, in about three minutes, the muscular rigidity and quivering relaxed, the head returned to its proper position, and the natural colour of the face and neck was regained. Three of these attacks took place during my short visit at the house, and I was excessively struck by their resemblance to those convulsive attacks produced artificially in the guinea-pig. After conferring with Mr. Pollard, we determined to insist imperatively upon the necessity of a wet-nurse being procured, as it appeared most likely that the artificial food was at the bottom of the mischief. After some demurring on the part of the child's mother, she finally resolved to obtain one the same day. We agreed to administer small doses of belladonna to the child every three or four hours, gradually increasing the dose. The result of these measures was that very slight fits occurred during the night and then gradually diminished during the following day. After the night of the second day following no convulsion whatever occurred; and I learn from Mr. Pollard, by a note dated a day or two ago (July 23, 1863), that "the child has been quite free from the epileptic fits ever since the wet-nurse was obtained last year, and that he has grown up a strong, fine child," only having had an herpetic eruption for some months, which Mr. Pollard expects will give way when dentition is finished.

Mr. Pollard proceeded to inform me that "during the last month he has had three cases of severe convulsions, the subjects being all brought up by hand;" and again he observes, "I have one at the present time; the fits came on the second day after birth, and still continue, though in a modified form. I have not been able to persuade the parents to have a wet-nurse."

Case 28.—Alfred P., aged two years and three months, delicate-looking, had been often "convulsed" when teething, was brought to St. George's Hospital for the whooping-cough, which he had had one week. The mouth was sore, owing to patches of stomatitis, and the fæcal evacuations were complained of as being very "white in colour." The thumbs of both hands were continuously and forcibly drawn into the palms. No pain was complained of, and no tenderness of the spine existed, but febrile symptoms were severe.

Ordered the antimony and ipecacuanha wine, along with the liq. ammon. acetatis every four hours, and a nightly powder of hyd. cum cretâ. This was subsequently changed for a mixture containing sulphate of zinc, extract of belladonna, and nitrate of potash, and a morning emetic of ipecacuanha wine.

At the end of three weeks the "whoop" was decidedly less in frequency and intensity, but there was no diminution of the cough. The thumbs were now not drawn into the hollows of the hands. No worms had ever been noticed as passed by the bowels. The medicines were continued, and, to obviate a tendency to constipation, and to pallor of the fæces, calomel and scammony were given in small doses. The thumbs became again contracted into the palms of the hands, and again ceased to be so. This happened two or three times during the remainder of the ten weeks that he was under treatment. Steel and quinine were subsequently given, and he was eventually discharged quite free from any spasm of the thumbs, and with only slight cough, with an occasional whoop.

Case 29.—Fred. B., aged 4 years, a healthy-looking child, who had never been subject to epilepsy, or any serious illness, and was of healthy family, was brought to the Hospital with a bronchitic attack, and in ten days afterwards appeared again affected by well-marked whooping-cough. Four days later, apparently in connection with the violence of the cough, "convulsions" came on, which lasted several hours. The following night was almost entirely passed in a state of convulsions, and he died on the following morning. There was no irritation about the gums, or appearance of "teething," and intestinal worms were not known to exist. After death, however, it was said a number of ascarides passed per rectum. No post-mortem examination could be obtained.

Case 30.—George B., aged 1 year, delicate-looking, had had a cough for three months, and subsequently became affected by whooping-cough, which his mother thought he had contracted among the out-patients at the Hospital. He had never in his life had anything like convulsions, but in the course of two weeks, amidst the efforts of the whooping-cough, was suddenly seized with "a fit," in which he struggled greatly, and foamed much at the mouth. After this attack I never heard of the child again having any further convulsive attack, though he was brought as a patient for several weeks longer.

Case 31.—Anne E. C., aged 13, delicate and strumous in appearance, was the subject of "convulsions" when cutting her teeth. One month previous to being seen she had a violent "fit," which lasted for several hours. During the attack she was, however, never unconscious. She again had a similar attack about ten days previous to being seen. This was much more severe and continuous, lasting more or less for three entire days, during which time both hands and both arms were violently flexed, but especially the right one; there was also much headache. Moreover, on this occasion the surface of the right arm was *much hotter than that of the other one, and was excessively tender to the touch*, so that she could not bear the back of the wrist to be in contact with anything around her. There was also, during this time, great want of power in the muscles of the feet.

General numbness, also described as "coming and going," was complained of in all the extremities. When she came to me the pulse was very feeble, but otherwise natural. Both pupils were more dilated than usual and sluggish, but equal. There was strabismus of the left eye, which she had had since teething (eye drawn inwards). The powers of walking were somewhat feeble, and there was a somewhat deficient power in grasping, but equally with both hands.

Ordered a calomel and jalap powder, and the quinine and iron, along with chloric ether and cod-liver oil, twice a-day.

No worms were found at any time in the evacuations, though the powders were repeatedly given, and nothing appeared in connexion with the teeth, etc., worthy of notice.

By degrees the child regained strength and health, and no return of spasm or numbness occurred, so that at the end of one month she was discharged as being apparently well.

Case 32.—A boy, aged 2½ years, under the care of Dr. W. Ogle, now of Derby; delicate-looking; family free from epilepsy, etc. Had for a year and a-half been subject to convulsive attacks, which first came on when he was "cutting teeth," and had recurred at various intervals, sometimes at two months' interval, sometimes twice a-day, and sometimes twice a-week. After cutting the teeth alluded to above, he had an attack of "spasmodic croup," and then whooping-cough. During the convulsive attacks he always became "very dark" in the face, and on some occasions foamed and bit the tongue severely whilst in the fits. The attacks were always of the same nature. He was never known to have had worms.

The boy died, and we had the opportunity of making a post-mortem examination, the results of which were as follow:—The body was tolerably nourished. On examining the cranium, the dura mater was found intimately adherent to the calvarium, but only as it is generally found in subjects of the same age. Much blood was found in the veins and sinuses within the skull, and the subarachnoidean fluid was somewhat increased in quantity. A considerable degree of clear fluid existed in the ventricles. There were also many "bloody puncta" in the brain, which throughout was of a very firm consistency, even the central white parts. Nothing like tubercular deposit, or fibrinous exudation or deposit, was met with in any portion of the brain or its membranes. In fact, no indication of disease which might have given rise to the convulsive attacks was found within the cranium, the venous congestion, or fluid effusion, being merely what would naturally be expected in the body of one who had died in, or soon after, a violent convulsive or epileptic seizure.

It appeared almost certain that the immediate cause of death was the sudden congestion of the brain and other organs; the remote cause of the attacks was doubtless some peripheric irritation, most likely in connexion with the teething.

Case 33.—James R., aged 9 years; healthy-looking, but the subject of "thread-worms." For several weeks he had been affected by a peculiar "turning up" or extension of the wrist and clenching of the fingers of the right hand, evidently of an involuntary nature. This occurred generally three or four times a-day, and pain was complained of in the limb. The other arm and both the legs were not at all affected. The mother said that the child had then got worms.

Unfortunately, after the visit, for some reason or other, the child was never brought again.

Case 34.—James W., aged 16 months; a healthy-looking child, and of healthy parents. At the age of eight months several teeth had appeared, but none since that period. For the six months previous to being seen, the child had been subject nightly to attacks of what the mother termed "crowing,"—violent stridulous inspiration, in which the face became "quite dark." At times there was a cough, which was attended by a "whoop." When I saw the child, the gums of the right side of the lower jaw were very full.

Ordered the gums to be lanced, and every other night a mercurial aperient powder. The diet to be especially simple.

No worms were brought away by the powders. The attacks of crowing inspiration continued, and an eczematous eruption broke out about the ears.

The gums were again lanced, and a few grains of the bicarbonate of potash added to the powders. Ordered also the ung. zinci to the ears. Still the noisy, stridulous attacks continued, and even occurred in the day-time as well as during the night. He had also attacks of struggling for breath, evidently owing to spasm of the glottis, and a good deal of cough. No worms had been passed. The child appeared in good spirits, and played about in a natural manner.

Ordered steel wine and cod-liver oil twice a-day, and, as the gums were still much swollen, that they should be again lanced.

At a subsequent visit, four weeks after the child was first seen, he was evidently worse; there was much fever; the respiration was very laboured and frequent, the expirations being attended by a noise which might be described as a kind of groan, and the cough was troublesome. Moreover, it was reported that a few days previously he had had a convulsive attack, lasting half an hour, in which there was much struggling, with perfect fixure of the eyeballs. On examination of the chest by the stethoscope, it was found that the lower and middle part of the left lung behind was full of large crepitation, and that the upper part of the right lung, both in front and behind, was very deficient in the natural respiratory murmur, and was somewhat dull on percussion. This aggravation, as regards the lungs, was attributed to the east wind, which for some days had prevailed, and been very severe. On carefully watching the child also, an occasional spasm or twitching of the muscles of the face was noticeable.

I at once recommended the child to be admitted as an in-patient, but, after a few hours' treatment of the congestion of the lungs, the mother foolishly removed it; and, at my recommendation, it was visited and treated from a neighbouring Dispensary.

I called to see the child at home a week after this, and found it had a regular attack of whooping-cough, but that there had been no return of the "fit," and no return of the crowing inspiration, etc.

Case 35.—Ellen B., aged 6, of delicate habit, with enlarged cervical glands. She had been subject to convulsions since a baby until a year and a-half ago, when they ceased altogether; they were generally ushered in by sickness and headache. She was treated for the enlarged glands by cod-liver oil and steel wine and the local application of the iodide of potash ointment.

After about a week she fell down quite suddenly, perfectly unconscious, and so remained for several minutes, without struggling to any extent, but no very exact account of this attack could be elicited.

Ordered scammony and calomel powders, which brought away a large number of thread worms. These were continued, with the effect of bringing away multitudes of the worms, and their action aided by rectal enemata of lime water and tincture of sesquichloride of iron. After this the patient ceased attendance.

Case 36.—Ellen C., aged 7½ years, a delicate-looking child. During the previous three years she had had six epileptic attacks. These came on always in a morning, and were always preceded for two or three days by headache, and just before the fit by pain in the bowels, and were followed by much "heaviness." During the attacks it is said that there was no struggling and no biting of the tongue, but the patient got quite "black about the eyes," and "looked just like a corpse," and became "quite stiff." She had had no attack for the space of a year until a week before. The nights were generally restless; the tongue furred; the appetite very defective. About four years previously it was found that she passed an earth-worm, but no worms of any kind have been seen since. None of the family were known to have ever had "fits."

Ordered calomel and p. scammon. co. twice in the week. These powders acted very briskly several times, but no worms of any kind were passed.

The steel wine and cod-liver oil were then prescribed three times a-day, and occasionally the hyd. c. cretâ and castor-oil to regulate the bowels.

At the end of five weeks no more attacks had occurred, but much pain across the forehead was complained of. In the course of a few days an attack followed, and after this the treatment was kept up, only varied by the use of the syrup of iodide of iron for fifteen weeks, during which time there was no return of the attacks. In one month as much as two pounds was gained in weight. After that the child was not again brought by her mother.

Case 37.—Fanny B., aged 21, a delicate-looking person, but of a family free from anything like epilepsy, had been subject to "fits" every week or two ever since she had whooping-cough six years previously. No actual cause could be detected, but she "used to cough until the fits came on." In the attacks, which always came on early in the morning, she often bit the tongue, and "had blood in the mouth," and often made a peculiar noise in the throat "as if she could not breathe properly." After the attacks she would remain dull for a whole day. No intestinal worms were known to exist. She had no pain. The pupils were equal, acting tolerably well, but were very dilated.

Ordered the tinct. ferri sesquichlorid. with sp. of chloric ether and quassia twice a-day. This treatment was persevered in for twelve weeks, with the occasional addition of a dose of senna, and at the end of two months of an alkaline aperient every other night (rhubarb and magnesia). At the end of that time the attacks had become much less frequent, and were very frequently represented by what was termed an attack of "tremblings." She then ceased to attend.

Case 38.—Honora Q., aged 4 years, a delicate-looking child, whose father had died of phthisis, had been subject to an attack of epilepsy about every six or seven days for six weeks. She had had an attack of whooping-cough for about two years and a-half, since which time she had been noticed to squint. Ever since she had had the fits she had complained much of pains about the jaws. She was very subject to thread worms, and had a good deal of pain at times in the upper cervical vertebræ. The urine was quite free from albumen and from sugar.

She was flushed and feverish, and appeared as if she might be teething, though no fresh teeth appeared to be coming.

Ordered the nitrate of potash and small doses of the spirit of chloric ether twice a-day, and subsequently calomel and compound jalap powder every other night; and after that the steel wine along with the powders.

At the end of a week there had been one fit; but at the end of the third week no further one had occurred. She then discontinued attendance, and I saw nothing further of her.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

GUY'S HOSPITAL.

POST-MORTEM EXAMINATION OF A PATIENT WHO DIED OF BRONCHITIS AFTER RECOVERY FROM OVARIOTOMY.

(Under the care of Dr. GULL.)

ANN G., aged 25, admitted February 9, and died May 21. She had been operated on in March by Mr. Bryant for ovariotomy, and made a good recovery. She had suffered from bronchitis since childhood. There were universal râles through the chest, evidence of dilated tubes, and expectoration in large quantity. She was better and worse with the cough for some time, when for a few weeks before death there were signs of disorganisation of the left lung. She died May 21. [For details of the operation see this Journal for April 25, 1863.]

Autopsy by Dr. Wilks.—The left lung was adherent to the chest. It had undergone a rapid disorganisation, so that there was a large, ragged cavity extending from the apex to the base at the front part. It appeared to be rather pneumonic than tubercular, as no tubercles were discernible, or rather a disorganisation arising from a subacute inflammation. The posterior part of the lung was consolidated by chronic pneumonia. In this part there were seen large dilated tubes, which had, no doubt, existed from infancy. The right lung was in an early stage of pneumonia, and was very soft, and in it the dilated tubes were not so large nor so numerous.

There was a cicatrix in the middle line of the abdomen. The wound was quite healed. On lifting up the parietes the omentum was seen to be firmly adherent to the cicatrix, and on cutting through this the uterus was seen with its left corner tilted forwards, and the peduncle of the ovary also firmly attached to the same spot. There was a small cellular adhesion between the stump and the sigmoid flexure, but with this exception the peritoneum was quite free and healthy.

EPILEPSY FROM DISEASE OF THE BRAIN FOLLOWING INJURY TO THE HEAD—DEATH—AUTOPSY.

George W., a strong, muscular man, aged 43, admitted May 9. He was admitted in a fit of convulsions, and was insensible. The convulsions continued with scarcely any intermission, and during this time he appeared to be paralysed on the left side. He had had a severe fall on the back of his head three years before, and had not been well since, *i.e.*, having had fits, but he had been able to work until the day of his admission. The first fit was twelve months after the accident. He had been an intemperate man. On May 9, the day of admission, at half-past 10 a.m., his fellow-workmen saw him turn round whilst at work, and gaze wildly; his face was contorted, and "blood ran from his mouth" (tongue-bitten ?). He was saved from falling, and placed on his back, and lay insensible for half an hour. He gradually recovered, and, after being in a somewhat stupid state for some time, resumed his work. He afterwards complained of intense headache, and at three o'clock he had a convulsive attack. He was brought to the Hospital at five o'clock, and when admitted was quite insensible and unconscious. Pupils dilated and insensible. Respiration laboured.

Autopsy by Dr. Wilks.—There were no signs of injury to the cranium, but it was more than ordinarily dense. This was especially the case at the posterior part where the bone appeared to have undergone some hypertrophy. On removing the brain, it was seen to be softened and of an ochry colour in several places. These were all at the base and on the most prominent parts, and evidently resulted from injury, being exactly at those spots which are bruised by *contre coup* in consequence of a fall on the head. Thus the left lobe of the cerebellum, the middle cerebral lobes below, and also the anterior lobes. The latter were also affected on their front as well as on their inferior surface. All these parts presented a brownish hue. The cineritious, as well as a certain portion of medullary matter beneath, was slightly shrunken and somewhat softer than usual. The anterior left lobe was firmly adherent to the dura mater by the arachnoid surfaces, so that the cerebral substance was torn on attempting to remove the brain. So also the under surface of the left lobe of the cerebellum was firmly adherent to the dura mater, and was torn on removing it. There was no inflammatory matter observable between the two surfaces, although of course there must have been some bond of union. The lungs were exceedingly congested, the posterior parts being in an almost apoplectic state.

LIVERPOOL ROYAL INFIRMARY.

CASE OF HEMIPLEGIA FROM COMPOUND FRACTURE OF THE CRANIUM—TREPHINING—RECOVERY.

(Under the care of Mr. BICKERSTETH.)

[Reported by Mr. RAWDON, House-Surgeon.]

G. F., aged 29, was admitted March 9. He was suffering from partial hemiplegia, being unable to stand or walk, and appeared very confused, and could not speak intelligibly. His friends stated that eight weeks ago he fell into a hole, about two feet deep, which caused a wound on his head. He, however, followed his employment as usual until March 2, when he was seized while at his work with "a stroke" of the right side. During the night previous to admission he had had repeated fits. Upon examining the wound, which was still suppurating, a fracture of the upper part of the left parietal bone was discovered.

A crucial incision was made, and a full-sized trephine used, when a large piece of necrosed bone was removed, with several splintered fragments. Under the impression that a collection of pus probably existed beneath the dura mater, a small puncture was made into it, but only a small quantity of serum escaped. During the first few days no immediate improvement followed, excepting that he had no recurrence of the epileptiform convulsions, but afterwards he steadily improved, and progressed favourably, with the exception of two slight fits during the latter part of his recovery. He was discharged quite well on April 20, and has since followed his ordinary employment.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

EPILEPSY TREATED BY THE BROMIDE OF POTASSIUM.

(Case under the care of Dr. RAMSKILL.)

SARAH H., aged 12, admitted July 3, 1862. She had suffered from epilepsy seven years. There has been no appearance of menstruation; had no convulsions when teething. Father is healthy. Mother had fits as a child ; they ceased on the accession of the menstrual period, and reappeared after the birth of the first child for about six months. The mother of this patient states that her child had some ordinary disorder of the bowels when five years old, which was followed by diarrhœa and melæna; she then had a fit, and was violently convulsed for twenty-four hours. She had no convulsions when teething. Since that time she has had one or two fits a-day, sometimes a dozen. Latterly her fits are in this respect peculiar, that she is never convulsed. She, if sitting down, suddenly starts up, walks across the room with a vacant stare, and always rubs her stomach with both hands. If out of doors, she does precisely the same thing. She will continue in her fit for as long a period as four or five minutes, more generally for about two minutes, and then be herself again. She resumes her occupation, whatever it may have been, without hesitation or astonishment. She does not twist her head, neither does she scream, nor have any respiratory trouble. The mother says she certainly has not passed a single day for many years without one or more fits.

There is no evidence to show that she has these attacks during sleep. Besides the vacant stare, there is usually remarkable pallor of countenance at the very beginning of each attack. She has never bitten her tongue, at least not for some years. There is no aura. There are no premonitory symptoms connected with mental, emotional, sensational, or motorial functions, and nothing to be discovered in the way of sequelæ; no coma, headache, vertigo, mental confusion, and neither are there any inter-paroxysmal phenomena of note beyond occasional jerks. She is very quick; has not suffered in memory. She is a well-grown child, looks healthy, but pale. On cross-examining the mother, it appears the patient had on one occasion a lumbricus, which passed from the nose; she has also suffered from ascarides, but never from tapeworm. On July 3, the day of her first visit to the Hospital, tincture of kamela was ordered in ʒss. doses every morning. It produced vomiting and purging, but there was no appearance of worms in the evacuations. Santonine, and afterwards castor-oil and turpentine were consecutively ordered, with a view of determining with certainty the presence or absence of parasites without result.

Belladonna in quarter-grain doses was then given with half a drachm of tincture of larch bark thrice daily. After continuing this treatment for fourteen days, on July 24 the report was three or four fits a day, each fit of much shorter duration; but the child seemed always poorly. There were no decided objective symptoms, beyond what suggested slight disorder of the mucous membrane of stomach,—a not unfrequent result of the administration of belladonna. Bromide of potassium was then ordered three times daily, in doses of eight grains, and she visited the Hospital nearly every fourteen days. The report was always the same, "no fits." In January, 1863, she was discharged, there having been no recurrence of fits for nearly six months. She has grown stronger and stouter; she has lost her "jerks," is not timid, and is apparently well in every possible way. It is worth mentioning that this patient had taken large quantities of steel, zinc, and cod-liver oil. Perhaps there could hardly be found a case in which, from the known properties of the bromide, a cure could be more easily predicated. The cerebral lobes were obviously chiefly acted on by the irritated excito-motor centre, and there was no extension of irritation down the spinal cord.

TORBAY INFIRMARY.

CONVULSIONS AND OTHER SEVERE SYMPTOMS, APPARENTLY ARISING FROM LUMBRICOID WORMS.

[Reported by Dr. W. BATHURST WOODMAN.]

MAY 13, 1863.—W. S., a fine large boy, three years old, was brought to me with the account that his bowels had been confined for a week, and that he had had a "fit." His face was then livid; pupils much dilated and immovable, and the eyes turned upwards and outwards; teeth clenched; his saliva running out of his mouth; general surface of body cold, except parts in contact; abdomen soft; legs apparently paralysed, and insensible to the ordinary stimuli, even reflex action being almost entirely absent in lower extremities, although persistent in upper. The child appeared perfectly unconscious, and passed urine unknowingly; these symptoms had been present about twelve hours it would seem. I ordered a warm bath and some calomel and scammony immediately; and told them to get a ticket, or procure further advice directly; or, failing that, to see me again early next morning, but I heard no more of the case for three days, when it was brought to the Infirmary by its mother in nearly the same state, except that the head was rather hot, and the conjunctivæ rather injected, and that the pulse, which before was that of concussion, now much more resembled compression.

Mr. T. B. Horne, who was kindly seeing patients for Dr. Macright, ordered two leeches behind the ears, four grains of calomel every four hours, the warm bath to be repeated, and cold to be applied to the head. No relief followed this, and the mother gave castor-oil and salts and senna, with no action on the bowels, and two days after the child was nearly the same, except that it was frequently convulsed; the respiration was laboured, but never stertorous. I then saw it again, and found it unable to swallow, so I ordered the warm bath again, and one or two quarts of very cold water to be poured on the abdomen with a jug, from a height, whilst in the bath. This was done, and the bowels were a little moved, but the strabismus, slavering, dyspnœa, etc., all remained. The next day a large lumbricoid worm was vomited, with some relief to symptoms. Having now, as I thought, a clue to the cause of illness, I ordered a repetition of the bath and cold affusion, and a mixture with ten minims of aromatic sulphuric acid, sufficiently diluted to be taken every two hours. Three more large lumbrici passed per anum in the course of the next two days, and the bowels were freely opened, but no scybala passed. The symptoms disappeared as if by magic, and the child made a rapid recovery.

ACUTE RHEUMATISM—CHOREA ON THE FOURTEENTH DAY.

[Reported by Dr. W. B. Woodman.]

February 10, 1863, I was called to see Elizabeth F., an intelligent child of 12, with fair skin, brown hair, and grey eyes, who was suddenly attacked with acute rheumatism after being wet through. All the joints were affected, but those of the lower extremities most. The pain was intense, and the swelling considerable. I ordered her scruple doses of bicarbonate of potash every four hours, and five grains of Dover's powder at bedtime, carefully protecting the joints with flannel. She was so much easier on the next day that her mother left off the mixture, but on the 12th she was much worse. Pulse 180. Heart's action violent, irregular, with great pain referred to the cardiac region. Tongue creamy white. Urine scanty, loaded with lithates and uric acid. There was occasional delirium. I ordered scruple doses of the alkali every two hours, and increased the Dover's powder to 10 grains; a large mustard plaster over the heart.

On the 13th she was better, but a slight murmur was heard at the heart's apex, synchronous with the pulse. The alkali was continued, and she improved rapidly, till on the 20th she was free from pain and sat up.

On the 23rd, her head, legs, and arms began to jerk about, but I did not see her till the 24th, when I found the right arm in almost constant motion, and the right leg jerked occasionally. I ordered an improved diet; added gr. v. of the ammonio-citrate of iron to the alkaline mixture, to be taken three times a-day, and out-door exercise when fine, and to resume the opiates which had been left off. Under this treatment the chorea, which at first was very violent, had quite left her at the end of a fortnight. I had been unable from the first advent of the chorea to hear any valvular murmur, although previously (on the 13th) it had been audible. The heart's action was, however, feeble and irregular, and, as the chorea left, this improved.

On March 3, the right arm was very weak, so that she could hardly lift it, or grasp with the fingers, but there has been no return of chorea; and at the beginning of June I saw her in rosy health, and could detect no valvular murmur, although she had been running about with her schoolfellows.

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Medical Times and Gazette.

SATURDAY, AUGUST 29.

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PHYSICIANS AND THEIR BILLS.

We have had on several occasions lately to notice actions at law in which members of our Profession have suffered as defendants, but during the past week the daily journals have recorded two trials in which the tables were turned on the public, and a Medical man appeared as plaintiff. Both trials were to enforce payment of Medical fees, and in one of them, Beck *v.* Farey, the plaintiff was awarded the full amount of his demand, £91 15s., and the report of the trial does not furnish any materials for comment; but the second, Beck *v.* Sterne, *does* require some remarks from us, bound as we are to notice all that concerns the fair fame of the Profession, and the comfort of Practitioners. Dr. Snow Beck, a gentleman of considerable reputation and scientific achievements, an M.D. of the University of London, a Fellow of the Royal Society, a Member of the Royal College of Physicians, a Fellow of the Royal College of Surgeons, and late Physician to the Samaritan Hospital, sued a Mr. Sterne for the sum of £591, for attendances on his wife and family from 1856 to 1859 inclusive, at Clapham and Stratford. It appeared the parties had been friends for many years, and had been associated in commercial undertakings, but that they had quarrelled; and it was affirmed for the defence that but for the quarrel this charge had never been made; that the visits charged for were social and friendly, almost all, in fact, dining visits; that whenever the plaintiff had been called in professionally he had been paid at the time; and that this claim had been sent in after the quarrel, without any previous account or demand.

We need not observe that such a defence is easily set up, and that when a Medical man goes some miles out of town to visit a patient, his accepting an invitation to dinner does not destroy his claim to Professional remuneration. But Dr. Snow Beck acknowledged that "he had never sent in any account of his present claim until this action;" that "his attendances were generally on Sunday;" that he "used rarely to go to the house without dining there, and he frequently stayed the evening there;" and that "he dined with the defendant on Sundays, in 1857, 1858, and 1859, but that he charged patients for attendances, though on occasions when he dined with them;" and when asked as to the materials from which he had made up his claim, "produced some little annual pocket-books, in which he said entries of the attendances were made, but in which he admitted that other matters, not Professional, were indiscriminately entered."

What a fascinating picture of Professional labour is here presented! Imagine it, gentle reader. The Physician, after a hard week's work in this Babylon of bricks, drives out on the Sunday to his friend's suburban villa, the quiet, and rest, and pure country air invigorating and refreshing both mind and body. Far removed from turmoil and noise, safe from disturbance and selfish summonses by London patients, he luxuriously dines, with added zest and enjoyment from a happy consciousness that he is combining business with pleasure. Dinner over, the olives and the wine are brought in, and with them appear also the olive branches. The Doctor criticises and enjoys the former, and pays delicate attentions to the latter. "Are olives wholesome?" "Certainly, my dear Smith, judiciously used they sharpen and invigorate the gustatory nerves, and increase the power of enjoying your admirable wines; enjoyment is an excellent test of wholesomeness." "May Miss Blanche have some fruit?" "Oh, by all means, my dear madam, such perfectly ripe fresh fruit as yours will do her good. Miss Florence feverish? Not at all. Natural roses—her cheeks (patting them tenderly) are as cool and fresh as the peaches in your beautiful garden. Master Fred? Well, perhaps he is a little pale; has been working a little too hard—a remarkably clever lad. I recommend him just a *soupçon* of this pure sound wine." Later in the day he is called on for his opinion of Miss Smith's voice; is it as strong, and clear, and sweet as usual? Then in the cool of the evening he drives back to town, serenely reflecting that he has spent his Sunday in the pure atmosphere of the English domestic circle, has strengthened himself for the labours of the opening week, and, at the same time, has earned a fee of three guineas, which fact is jotted down in the "little annual pocket-book," in the "engagements" column of which P so conveniently does duty for "Prandial," as well as for "Professional."

Our Medical brethren generally we believe,—we hope had nearly slipped from our pen,—when they put their legs under a friend's mahogany, throw aside all Professional cares and ideas, they rejoice in being for a brief time simply friends, the relation of Doctor and patient forgotten; but Dr. Beck, a man of high attainments, an F.R.S., a master mind, has revealed to us a much higher and more perfect style of carrying out our Profession. He never flags in his work; with him Homer never nods; the friendship, the sociality, the festive enjoyment are the same, but the great work of his calling is also kept in perpetual remembrance, and is carried on at the same time. But, grievous as it is to us, we must warn the hard-working lesser lights of the Profession not to be carried away by their enthusiastic admiration of Dr. Beck; not to rashly encounter the difficulties and dangers of following his example, for, alas! even he was not able to command success. For the perfect carrying out of his plan one thing was wanting—reciprocity on the part of the friend and patient. Mr. Sterne, we grieve to record it, sternly declined to "accept the situation," and a cruel jury refused the Doctor a verdict, a refusal which was endorsed, with comments, by a ruthless judge. Yet what more could Dr. Beck have done? He was willing to be considered as "a general Practitioner," as "a Surgeon and Physician," or as "a consulting Surgeon and Physician," and to give almost unlimited credit. Perhaps he erred too kindly on this latter head, and perhaps—we make the suggestion with much diffidence—it would have been better had he earlier made Mr. Sterne understand that his visits were Professional. We greatly fear—alack! for the rarity of Christian charity under the sun—that many will believe, with the hard-hearted jury, that his relations with Mr. Sterne were anything but Medical, that his little dinings were not consultations, that he was, in fact, a mere guest, not a Physician paying Professional visits. And yet, we repeat, what more could the Doctor have done for his friend and patient? Let our readers study his evidence.

"The plaintiff, cross-examined by Mr. Chambers, admitted that he had never sent in any account of his present claim until this action. He had been for some years intimate with the defendant, and had been recommended by him to the Samaritan Hospital, and had been a co-director with him of the Australian Investment Society; and he had been accustomed for years to dine with the defendant. He was pressed whether he had not charged for visits when he had gone home and dined with him, and this he denied. He had been good friends with him up to 1859, when there was a dispute as to the partnership, which was referred to Mr. Farey, the defendant in the former action, and another gentleman. (The defence in the former action was that he had never made any claim against Mr. Farey until he awarded against him.) He had signed an agreement of reference 'of all other matters in difference between us,' and he had never brought forward this enormous claim before the arbitrators, or any part of it. (The award was put in, and was in favour of the plaintiff to some extent, and a sum of money was awarded to him.) He had afterwards taken proceedings against the defendant in bankruptcy, but had not succeeded in making him a bankrupt. Then there was a general reference to the arbitration of Mr. Raymond, in the year 1861, of all 'matters in difference' down to June, 1859, and there was no claim for the matters brought forward in this action. The whole amount of money awarded by Mr. Raymond had been paid,—the last instalment in June last; and on June 30 this action was brought, without any previous application, and without any previous account. Asked as to the materials from which he had made up his claim, he produced some little annual pocket-books, in which he said entries of the attendances were made, but in which he admitted that other matters not Professional were indiscriminately entered. Asked if he was a Physician, he said he was not, though he was styled 'Physician to the Samaritan Hospital,' and was called 'Dr. Snow Beck' on his door. Pressed if he visited patients as a Physician, he said he had done so, and received his guinea fees, generally at parting. Sometimes he attended gratuitously, though not for years, and sometimes gave advice gratis to a friend at dinner. The attendances at Clapham in 1856 were generally on Sundays.

"The learned Judge: At six o'clock? (Laughter.)

"The plaintiff said that the family usually dined at two o'clock, and he often dined there on the Sunday, and took his wine with the family. Asked if the defendant had not made him occasional presents, he admitted that he had, but before 1856. He admitted having had a present of a case of champagne and a set of diamond studs, but prior to this account. He also had a roll of linen for shirts—(a laugh)—not very fine. He had paid, however, for all this by his Medical attendance for three years. The defendant had also lent him a watch, which he had kept some time, and gave up pending the reference before Mr. Raymond. Pressed as to his charge of £10 10s. for attending Mrs. Sterne as an accoucheur, he denied that he had been paid it, but admitted that a subsequent accouchement had been paid for, and that he had not then mentioned the present claim. He had dined with the defendant on Sundays in 1857, 1858, 1859, but he charged patients for attendances, though on occasions when he dined with them. He used rarely to go to the house without dining there, and he very frequently stayed the evening there. Asked if he did not know that a Mr. Cooper was the regular Medical attendant of the family, he swore he did not know it, though he admitted he knew he attended them. He said he attended the family as a General Practitioner; but being then asked how he came to charge £3 3s. an attendance, he said that a General Practitioner could charge anything; and when pressed as to whether a General Practitioner charged even a guinea for attendance, he said he meant that he attended as Surgeon and Physician, and, he added, as Consulting Physician and Surgeon. He admitted that he had brought an action against another friend for £300, for six years' Medical attendance, and that was after several years."

See how vigilant and lively his interest in Mr. Sterne's welfare, extending even to his worldly prosperity! And who can read unmoved the evidences of the close friendship existing between the two! How conclusive is the Doctor's acceptance of the "case of champagne," of "the diamond studs," of "the roll of linen for shirts—not very fine!" it is quite touching. He even condescends to borrow his patient's watch! Who could have imagined so sad and prosaic an ending as an action at law. But patients are proverbially ungrateful,—

"Three faces wears the Doctor. When first sought,
An angel's; and a god's the cure half wrought."

The period of champagne, diamond studs, and linen for shirts,—

"But when that cure complete, he seeks his fee,
The Devil looks less terrible than he."

Dr. Beck, alas! forgot this, and confided in his friend and patient; and the consequence is that he is added to the list of "martyrs to misplaced confidence."

The loss of hardly-earned fees is hard to bear; but is this all the penalty inflicted? Alas! we dare not hope so; we cannot but fear also that the trial may seriously affect Dr. Beck's prospects as a diner-out; while the action was pending, how many men must have nervously tried to recollect how often they had asked Dr. Beck to dinner; and now, so narrow-minded is mankind in general, how many may think it advisable to revise their dinner-lists!

We fear that *we* cannot give the Doctor any consolation, but Genius has a marvellous power of consoling itself, and defeat only spurs it on to new efforts. A man of Dr. Beck's eminence will not be easily discouraged; he will rise superior to defeat, and will doubtless carry out his plan for combining the *dulce* and the *utile* triumphantly in some future effort.

SYPHILIS IN THE CAMP.

FROM the day when this loathsome disease was first noticed to the present, it has always haunted the camp and barrack. Prevalent as it is in private life, it excites but little notice. Silence is ensured by that popular kind of delicacy which consists in ignoring evils and refusing remedies, lest those evils should seem even indirectly to be sanctioned, or lest public morality should suffer by their discussion. But as regards syphilis in the camp, it is a palpably breeches-pocket question, and the interests of the tax-payer may compel a notice which could not be extorted on grounds of mere humanity or morals.

It is sufficient to mention the great loss of strength caused by venereal disease in the army and navy; the number of men whom it consigns to the Hospital, and the havoc which it makes of health and strength for weeks or months, or even for life in men who recover.

In the year 1859, no fewer than 422 men out of every 1000 were sent into Hospital suffering from syphilis and gonorrhœa, and 369 out of every 1000 in the following year. The ratio of admissions into Hospital per 1000 of mean strength of the Forces in the United Kingdom was—in the Dragoon Guards and Dragoons, in 1860, 356, in 1859, 402; in the Royal Artillery, 446 in the former year, 571 in the latter; in the Royal Engineers in the two years, 324 and 468 respectively; in the Military Train, 427 and 580; in the Foot Guards, 287 and 388; in the Infantry Regiments, 324 and 399.

The questions then come—Can this waste be stopped? and if so, how? And the possible measures may be divided into those which only require a will at head-quarters to set them going at once, and those which would require some alteration in our existing laws and customs.

We need scarcely say that all that tends to the well-being of the soldiers in mind and body,—all means of healthy exercise, rational employment, open recognised amusements, coffee-houses, cricket, music, newspapers, etc., not to speak of express moral and religious instruction, and greater opportunities of marriage, ought to be fostered. Disease will be always in the inverse ratio of wholesome occupation and amusement.

But it is perfectly certain that, do what you will, a certain number of men will go astray. It may be odious, lamentable, disreputable, unmentionable, etc., but it is a fact, and a very hard one, and it must be dealt with. If A. and B. do not choose to interfere because of their morals, that is their affair. C. and D. have a right to interfere because of their pockets. In the remarks that follow we will not argue for the suppression of immorality, but of disease. The two go together, but our concern at present is with the disease. The tax-payer has as much right to demand a suppression of syphilis as he has of sinecures, jobbery, or any other kind of public waste.

In the first place, there should never be lack in camps and barracks of opportunity for thorough ablution. Simple as it seems, the importance of this in preventing disease is obvious.

Secondly, the greatest possible liberality should be shown in the erection and maintenance of Hospitals for women. They need not be called Lock Hospitals, nor Magdalens, nor have any designation suggestive of sour penitential discipline. Rather call them Hospitals of the Good Shepherd. As a matter of public policy, no women ought to be deterred; on the contrary, all women should have the opportunity, should be encouraged, nay, even most lovingly invited, if affected with this loathsome malady, to enter and be cured. The sources of infection ought to be thus dried up and cut off.

But what an outcry amongst the doctrinaires and Puritans! What an encouragement, they will say, to vice! That miserable wretches are invited to come and be healed, at the public cost, of diseases brought on by their own debauchery, and so are to be encouraged to go on and sin!

There is only one infallible way of stopping the mouths of people who talk like this, and that is for one of their own boobies of sons to get infected himself. But we would urge it, not out of humanity to poor suffering women, but out of regard to the interests of the tax-payer.

Yet women are hardly used. There is no doubt that they enter into the battle of life at a disadvantage. English girls have little or no direct moral teaching on the subject of the relations of the sexes. It is a subject which scarcely admits of public handling by ministers of religion in that part of their public functions—the sermon—for which they are individually responsible. It is one, too, which the namby-pamby priggism of the age tempts them to shirk or to soften down when they have to treat of it officially in parts of their functions which are laid down for them, and for which, consequently, they are not individually responsible. Thus, they often omit that plainspoken, honest passage in the introduction to the English Marriage Service, which would tell upon many a young man and young woman present. But not only are girls inadequately fortified by education, but they are intrinsically weaker than men. Not so wicked, but more weak; often ready to abandon their own honour, as was well said in the *Westminster Review*, not to please themselves, but as a sacrifice of self to any man who flatters and loves, or pretends to love them. Myriads of young girls, mere children, fall victims. Detected in disgrace, they lose their characters and situations, and sink from one haunt of vice to another, till at last they are compelled to herd at nights in covered way or in the London parks. It is only the Medical officers of London parishes who can tell of the wretched children in the worst state of filth and disease are brought by the police shivering to the workhouse doors. Some of them die. Now, we will not ask for a bed and a chance of reformation for these victims in the name of Christian charity. We will not ask it in the name of common justice, though in so doing we might point to the large army and navy, and the large number of young men who, through social conditions, are obliged to defer marriage, and who are constantly at work seducing unfortunate women, and bringing them to a state in which they breed and spread disease that brings rottenness to the bones of untold generations. But as men of sense we will not allow these poor outcasts the facility of poisoning our soldiers and sailors, to say nothing of young men nearer home.

Free Hospitals then we affirm to be a measure of public necessity. They ought to be provided at the public cost in all garrison and seaport towns for such women as can be induced to enter.

But judging from actual facts, we doubt whether something more will not be necessary to make the scheme work.

Some small idea of a garrison may be got from the Hyde Park Barracks and the women in the London parks. We learn that during the summer months about 70 or 80 girls are, or till quite lately were—for we believe that at present the police have orders to suppress the nuisance—to be found in Hyde Park, where they lived out-of-door life, skulking about and hiding themselves by day, and passing the night in the company of soldiers, whether on or off duty we know not, and such other persons as they might find there. During the last year, 37 of these girls have, as we are informed, been brought to the workhouse of St. George's, Hanover-square, usually at night by policemen. Very few are brought in during the winter months; for instance, 2 in January, 1 in April, 4 in May, 3 in June, 12 in July, etc. The entries in the porter's reception book, as we are informed, show the constable, the hour, and the cause of admission. Thus:—

"Feb. 22, 1 a.m.—Police-constable 134 A.—B——, Ann, 19, servant, venereal, from Park.

"June 14.—C——, Emily, 17, from Park, filthy."

And so on of the others. They do not come in of their own accord, nor yet from want, for our informant says they are well fed by their military lovers, and in good condition, but are brought in by the police when too lame from illness to "move on;" so that, although we have in the liberal and well-managed Parochial Institution of St. George the very essence of a Hospital, yet we find the girls unwilling to come. They often insist on leaving before they are well; seven went out in one day lately, and the attractions of their wild and dissipated life must not be underrated. They are for the most part mere children, from 17 to 20 years of age. One of the thirty-seven, aged 17, died; one remains, desirous of going to a reformatory; the balance go out when they please. We believe some of them go at times to Workhouses, and get food and shelter as tramps; but the practical evils are these: they will not come when first ill, and cannot be forced to remain till quite well.

Therefore we are quite ready to ask for legislative interference; and although we do not pretend to have a suitable Act of Parliament ready cut and dried for the purpose, there may be no harm in ventilating the possible provisions of such a possible Act.

The shortest and simplest basis to adopt, as it seems to us, is to treat disease in woman as a public nuisance. Not to license prostitutes if healthy, but to shut up the diseased ones. With proper management, it would be easy to charge notorious women of loose life, and frequenting camps or garrisons, with the disease, and of compelling them to remain in an institution until cured. Something, too, may be done to prevent the open carrying on of the harlot's trade in public thoroughfares. But we say it in all sincerity, that, whatever measures be adopted, society must set them to work with the confession, "We are verily guilty concerning our sisters;" and that, apart from the protection of the public, it is right to give the poor creatures even a forced respite from their unhappy calling, if not a means of permanent escape.

THE WEEK.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The meeting of the British Association now taking place at Newcastle-on-Tyne has proved unusually attractive. Upwards of 2000 associates have been enrolled. The popularity of the President, Sir W. Armstrong, the numerous places of interest in the neighbourhood, and the facilities offered by the railways for excursions, have combined to draw an unusually large attendance to the Science Congress.

Sir W. Armstrong's inaugural address, which reviewed the progress of science since the Association last met at Newcastle, twenty-five years ago, was in every respect worthy the occasion. The progress of mechanical science—the consumption of coal, and its probable early exhaustion in this country (Sir W. Armstrong calculates in 200 years), the uneconomic use of heat in the steam-engine—the possibility of devising heat-engines, by which the fuel employed shall be made to generate sensible heat to the exclusion of latent heat, and also by which unutilised heat rejected by the engine shall be arrested and caused to operate in the reduction of fuel—the probability of electricity being used as a motive power, and the reflection that whether we use heat or electricity, we must still depend upon chemical affinity as a source of supply, and in so doing must still consume material—the improbability of being able to dispense with the oxygen of the air as a source either of thermo-dynamic or electro-dynamic effect, and the consequent impossibility of doing without oxidisable substances of which coal is probably the cheapest—were the subjects touched on in the former part of the address.

The motive power of water descending from heights, and the probability that in time natural waterfalls may be brought into useful operation, was the next topic discussed. The wasteful use of coal in metallurgical and ordinary domestic operations, the combustion of smoke, the failure of the Davy lamp to reduce the number of accidents in coal mines, for the reason that it has been the means of enabling mines to be worked, which from their greater explosive tendencies would have been otherwise abandoned, and thus has led miners into more perilous undertakings; the discovery by Berthelot of a new form of carburetted hydrogen possessing twice the illuminating power of ordinary coal gas; Dr. Odling's method of producing this gas by mixing carbonic oxide with an equal volume of light carburetted hydrogen, and exposing the mixture to intense heat in a porcelain tube—the discovery of the same gas by Mr. Siemens in the highly-heated regenerators of his furnaces, and the probability that it will soon supersede ordinary gas for illuminating purposes, were the subjects then passed under review. The President next referred to recent discoveries as to the materials of which the sun, the great motive power on our earth, is composed; the spectrum experiments of Bunsen, and Kirchoff, and Mr. Nasmyth's remarkable discovery, that the bright surface of the sun is composed of an aggregation of apparently solid forms, 1000 miles in length and 100 in breadth, shaped like willow leaves, or some well-known forms of Diatomaceæ, and interlacing one another in every direction—the enormous chasms in the sun's photosphere, to which we apply the diminutive term "spots," exhibiting the extremities of these leaf-like bodies pointing inwards, and fringing the sides of the cavern far down into the abyss—the sympathy existing between forces operating in the sun and magnetic forces belonging to the earth—conjectures as to the renovation of the sun's heat—the dynamical theory of heat, and its connection with gunnery. He then reviewed Professor Tyndall's recent discoveries respecting the absorption and radiation of heat by vapours—the advances in meteorology, and the balloon explorations of Mr. Glaisher—symbolism—stenography—the metric system—the discovery of the sources of the Nile by Speke and Grant, and the other achievements of the Geographical Society—and concluded with some thoughtful remarks on the Darwinian theory, and the evidences of the antiquity of man collected by Sir C. Lyell. The address, of which we have indicated the heads only, must be carefully studied to be estimated at its full value. Next week we hope to give our readers a detailed account of the whole meeting. We hear that Medicine, as usual in all scientific gatherings, is well represented, and we doubt not that in the physiological, zoological, chemical, and ethnological sections ample material of interest will be offered to our Professional brethren.

THE SEYMOUR LEGACY AND THE LONDON HOSPITALS.

An advertisement appeared in the *Times* of the 24th inst. in reference to the residuary bequest of Lord Henry Seymour to the Paris and London Hospitals. It directs that all persons claiming to represent the Paris and London Hospitals ("Hospices de Paris et Londres"), and the London Lunatic

Hospital ("Hospice des Lunatics de Londres"), should appear by their solicitors, and prove their claims at the chambers of the Master of the Rolls, in the Rolls-yard, Chancery-lane, on November 9, 1863. Lord Henry Seymour died in Paris, in August, 1859, and left the bulk of his enormous property to the "Hospices de Paris et Londres." It has yet to be settled, however, what "institution or institutions, person or persons," is, or are, according to the law of France, meant by the word "Hospices," and therefore have a right to share in the legacy. A correspondent of the *Times* recommends to the managers of the London Hospitals the expediency of acting in concert in this matter. He advises that the solicitors of the several Hospitals should meet and settle upon some combined mode of action, or, as he justly observes, a large portion of the legacy may be easily swallowed up in legal expenses. The advice, we almost fear, is too good to be adopted. We only hope that no feeling of jealousy on the part of the management of the Hospitals, or of self-interest on the part of their lawyers, may prevent its reception.

THE FIRST CASES OF OVARIOTOMY IN IRELAND.

The fact that ovariotomy was performed last week for the first time successfully in Ireland must not be allowed to pass over without notice. It is very creditable to London Surgery that Mr. Spencer Wells was the operator in the first and second cases, and to Dublin Surgery that the example should have been immediately followed by Mr. Walsh, Senior Surgeon to the Adelaide Hospital. Three cases of ovariotomy in one week in Dublin excited very lively interest there, and the operations were witnessed by many of the leading Physicians and Surgeons of the city. The effect must be very great upon Professional opinion in Dublin; and when the details of the cases are fully known, they will probably do much to hasten the general recognition of the operation by the Profession in Ireland as a perfectly legitimate Surgical proceeding.

THE ADDRESSES DELIVERED AT THE BRISTOL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

It was our original intention to have given full and early reports of these Addresses. Forming as they do prominent features in the yearly history of the Profession in our own day, and being as it were measures of the professional and literary culture of the best men in the most conspicuous places, we felt it both a homage to the authors and a duty to our readers to give them a larger amount of circulation than they could have attained through the official organ of the Association. But accidental circumstances foiled us in our purposes, and our good intentions are gone to their appropriate resting-place. Our space, too, is so occupied and so much in demand, that we are compelled to delay, if not to forego, our purpose altogether. Yet we must, in justice to the authors, add a few words.

Of Dr. Symonds' address we have already given an abstract. It needs no fresh eulogy.

Dr. W. Budd's address, of which a copy, with the author's corrections, lies before us, is a remarkably lucid and trenchant exposition of the doctrine of contagion. There is a passage in it quoted in the short abstract at p. 172 (*Medical Times and Gazette*, August 15), which admits of an ambiguous interpretation, but which really means this. We speak in common parlance of *contagious* diseases, for example, small-pox or typhoid, becoming *epidemic;* and it seems to be assumed that when such a disease, instead of being confined to one house, spreads over a whole county, that some new element, some unknown something, differing from the ordinary contagious poison, has come into play. Dr. Budd's meaning is, that a contagious disease, when epidemic, simply shows its contagious powers on the largest scale; and under the influence of circumstances which make some organic poisonous bodies in some years unusually prone to propagation. Just as flies, mushrooms, locusts, etc., may be abundant—*i.e.*, epidemic—in some years, but yet have no other mode of origin or propagation than the common egg or spore. The importance of destroying all the excretions of sick or fevered patients was fully shown.

Mr. Pritchard's address was an admirable exposition of practice founded on reason; and as Mr. Pritchard believes, and we fully believe, too, is confirmed by experience. The object in carbuncle is to secure speedy issue for slough and discharge. If that be accomplished by incision, the poisonous matters may be sucked up by the divided vessels, and pyæmia result. But caustic potass has the effect of so liquefying the diseased tissues that it at once dissolves skin and slough, and allows of their discharge without the hazards of incision.

Dr. Swayne, in the course of his very able summary of the progress of midwifery, gave the following as the results of his experience in the various branches touched upon:—The occasional ill effects of chloroform in retarding labour, relaxing the womb, and inducing hæmorrhage, and frequently in producing a state of half stupor of the fœtus. The last result is certainly not frequently observed in London. On the other hand, he lauds its efficacy in rigidity and obstetric operations. He details a case of Cæsarian section performed by Mr. Coe on a patient under his care. The child was saved; the mother died with incessant vomiting. He affirms the use of bleeding in puerperal convulsions, and winds up with remarks well worth reading on the mutations of obstetric doctrines with regard to interference. Although duly cautious in his remarks, he evidently, like all other enlightened accoucheurs, would rather use the forceps than let a child's head remain for hours hopelessly jammed in the pelvis.

MARRIAGE IN THE ARMY.

Whilst the subject of venereal disease in the army is forcing itself on public attention, the condition in which the soldier finds himself who, by good conduct and long service, has obtained permission to marry, must not be forgotten. What is the reward this country holds out to a man who has battled through his long years of celibacy in its service, and in middle age has arrived at the coveted position of being allowed to marry, with the privilege of housing wife and children at the public expense? An answer is given in a letter which has lately appeared in the *Times*. The writer, who signs himself "An Old Soldier," describes the way in which the soldier's wife and children are kennelled at Aldershott, Shorncliffe, and the Curragh.

"At Shorncliffe," he writes, "four and even five families, men, women, and children, are put up in one hut—that is, in one room, as the huts consist of but one room, about forty feet by twenty feet, without any wall or partition of any kind to separate them. The inconvenience and indelicacy of this arrangement can be easily understood—persons of all ages and sexes constantly dressing and undressing in the same room! In most of the huts, at night and sometimes by day, the families run blankets, sheets, or curtains across the rooms, to try and make them to a certain extent private; but generally they are obliged to take them down in the day-time for circulation of air.

"When four families are in one of these huts they have sufficient actual space, five families are crowded, and six are a regular jam. When it is recollected that the members of five families consist of from twelve to twenty persons of different ages and sexes, this mode of herding people together cannot be too severely censured, as it is destructive of all comfort, privacy, delicacy, and religion. The constant noise made by so many people in one room, the crying of children and babies, the quarrels, etc., make the married huts intolerable, and nothing but absolute poverty obliges married soldiers to live in them. How religion can either be taught or practised in such a constant scene of turmoil and discomfort I leave it to the garrison chaplains to explain to the British public in your columns."

If it be the intention of Government to put a stop entirely to marriage in the army, orders had better be issued to that effect; but to house decent women and children in a manner which can only be compared to that of the worst den in St. Giles's, is a public outrage on every feeling that distinguishes man from the brute, to say nothing of any bearing it may have on the hygiene of the camp. Many a man would rather live and die unmarried than expose a respectable woman to such degradation.

THE DERBYSHIRE MURDER.

Until the trial is over it would be out of place to enter on the graver aspects of the frightful murder in Derbyshire, which seems to be the culminating point of a series of horrors that have for months past given unusual blackness to our criminal reports. We only now call attention to the remarkable Medico-legal facts detailed in the evidence given before the magistrates and coroner. Mr. Mant, the Surgeon, of Worksworth, who examined the body of the murdered lady, stated that he found three wounds, one on the right side of her neck about three inches long, extending down to the spine, and dividing the principal vessels of the throat, one an inch and a-half in depth, extending to the vertebræ, which appeared to have been severely damaged, and another which penetrated the left shoulder-joint. Death had resulted from hæmorrhage. The instrument of murder was a large clasp pocket-knife, about six inches long, the end of which was broken, owing, it is supposed, to its having come in contact with the spine. Yet, notwithstanding these mortal injuries, the poor young lady was able to say to the passer-by who found her, guiding herself by the bank and wall as well as she could,—"There is a gentleman down there who has cut my throat,"—to repeatedly ask to be taken home, for she was dying,—to ejaculate a prayer several times, and to walk, with support, about twenty yards. It does not appear to have been stated in the evidence what vessels were cut, but if either of the carotids were wounded, the circumstances under which the murdered girl was found, the time consumed before death, and the power she retained of speaking and acting, constitute one of the most remarkable Medico-legal cases on record.

THE CASE OF FREUND *v.* BOLDERMANN.—ADMINISTRATOR OF ROTH, DECEASED.

Lawsuits for fees in which Physicians figure as plaintiffs, seem on the increase. We venture to prophecy that a twofold moral will be taught by them. First, that Physicians should obtain their fees from their patients at the time of their attendance. Secondly, that fees which the public look on as *honoraria* never can and never will be recoverable in a court of law with any certainty. If Physicians are content to give up their present rate of payment, to keep books and send bills, they may avail themselves of their privilege (?) of recovering, but they must not expect common juries to allow claims for amounts which patients have for centuries willingly given. In the present case the plaintiff was plainly unable to prove his case. It appeared that he had kept no registry of attendances, and could only produce the general evidence of his own servants and a chemist as to their number. His patient died, and he then brought an action against his estate for four years' attendance:—

"The Physician, a German, lived at Finsbury; the patient at Pimlico; and the alleged attendances were at the residence of the plaintiff, he never having, as he stated, inquired or known of his patient's address, and never having delivered any claim or account during his patient's lifetime. There were, according to his 'particulars of claim' and his evidence, as many as 120 visits in 1859, 60 in 1860, 20 in 1861, which were charged for at the rate of 10s. 6d. a visit. He admitted that he had been paid for the first four or five attendances, and he alleged that the deceased had excused himself from further payments on various grounds. He stated, however, that he spoke to him repeatedly about payment, and he assigned this as the reason why he had not sent his account in during his patient's lifetime. Upon his death he claimed £125, and, on payment being refused, brought this action, in which he claimed £131. The sum of £25 had been paid into Court, and the plaintiff went on with the action to enforce the residue of his claim. The defence in substance was that the rest of the claim was false and fraudulent, though there had been a basis of truth for it to the extent of the sum paid into Court. The plaintiff, who stated that he had been in practice in London twenty-four years, swore positively to his attendances, and the patient's excuses for payment, mostly based upon his alleged poverty. It appeared, however, that the deceased, who was unmarried, was in a situation of some hundreds a year. It further appeared that the plaintiff heard, after the death of his patient, that he had insured his life, and he had refused to certify to the cause of death for the purpose of recovery under the policy unless his demand were satisfied. The particulars of his claim and his evidence alike were, it will be observed, 'in the lump,'—that is, so many attendances in one year, so many in another, and so on; and, being asked if he kept books, or sent in yearly accounts, he said he did not. His evidence, however, as to the attendances at his house was confirmed by his servants, and also by a chemist, who had seen the patient, and spoke to the apparent nature of the disease. The jury found a verdict for the plaintiff for £5 additional."

CHEAP INTOXICATION.

A chemist has written to the *Times* to enlighten the public mind on the cheapest way of getting intoxicated, and on the losses which accrue to the Revenue by the manufacture of sweet spirits of nitre. We have heard of druggists' assistants making free with the spirits of wine bottle and tincture of cardamoms, but to be "overtaken" on sp. æth. nit. with a lump of sugar and hot water, is a refinement in the art of clandestine inebriation of which we confess we were ignorant. The chemist writes:—

"In the one article of spirit of nitre I have no hesitation in saying the Treasury is mulcted of perhaps a million pounds annually, a very little of that article is sold which is not distilled from 'methylated finish.'

"I may mention that there is a very cheap process of becoming intoxicated without paying a penny to the Excise for the stimulant. It cannot be doubted for a moment that the enormous quantity of sweet spirit of nitre sold is not taken medicinally. When taken with hot water and a lump of sugar it is tolerably palatable, and, at 1s. per lb., as sold by many tradesmen, any poor old woman, opium eater, or other, whose habits of intemperance are very great, can for about threepence to sixpence acquire their miserable object.

"As a chemist of several years standing, I can vouch for the numerous stomach-aches which have to be cured by that wolf in sheep's clothing "Sweet Nitre."

That the use of methylated spirit in pharmacy, except in the preparation of external applications, is most reprehensible, we have always maintained; we know, however, that it is common, and doubtless the Revenue suffers. But the chemist's conclusions are no less difficult to swallow than the cheap abomination which he would have us believe is a favourite stimulant with the British public. How many human palates and stomachs are there so completely Macadamised as to allow their possessors to quaff with a relish sweet nitre made with methylated spirits? Did our readers ever taste it? The vilest compound sold in a London gin-shop is nectar to it. *Chacun à son goût*, it will be said. True enough, but we suppose that poor old women are not exceptions to their class, and from some experience obtained in a London institution, where, for a time, the methylated spirits of sweet nitre was employed on the score of cheapness, we are strongly of opinion that whilst they have the threepence or sixpence the chemist writes of, it will find its way to the gin-palace, and not to the druggist's shop. Until there is evidence to prove the contrary, this newly-discovered use of a nauseous, impure drug, and the annual million at which the public loss is placed, may be set down as equally problematical.

FROM ABROAD—MEDICAL EVIDENCE—THE "DIARIO ROMANO"—MEDICAL ASSOCIATION IN BELGIUM—CONSANGUINEOUS MARRIAGES—THE HEAT OF THE PRESENT SUMMER IN PARIS.

In an article on "Medical Experts," contained in a recent number of the *American Medical Times*, are some remarks on Medical evidence which may be perused with profit:—

"Unfortunately, Physicians are too often induced from some motive to volunteer as experts, and to give evidence for the party in whose favour they are especially prejudiced. In their evidence they declare themselves able to fulfil the obligation of their oath, and, as in the case of lawyers, think they may accept and defend any cause. This is a great mistake, and the difference of the two avocations in this respect is striking. It is plain that an accused person must in all cases have legal advice. Whether guilty or innocent, every prisoner should be dealt fairly with according to law. Besides, the authority of an advocate and of a Physician is not of the same kind. The pleadings of the advocate leave court and juries free to appreciate the value of legal discussions, but the expert is pledged by oath to state nothing but the truth, and his opinions are accepted by juries as the accurate deductions of knowledge. The Physician who plays the part of an advocate assumes a fearful responsibility, and may defeat the ends of justice. The differences of opinion among Physicians, and their mutual jealousy, has often been magnified, and is very generally deprecated by judges and lawyers; but we believe that such differences, especially in civil cases, may fairly exist. In certain suits of a criminal character the proper explanation of the facts must be given in the form of theory. Reasoning upon the same facts, Medical men, like others, may, and will arrive at different conclusions; these conclusions, although different, are, however, honestly entertained and are truly the legitimate deductions from the facts presented and interpreted by science. It would be manifestly wrong to insist that Medical men, when in the witness-box, shall entertain the same views and follow the same inductions, or that experts should act the part of judges. Medical witnesses are but *men*, and therefore liable to the infirmities of human nature. In several countries of Continental Europe legal experts are called in courts, either by the presiding judge or by the parties to give their opinion, which must be based, first, on a written report, and afterwards must be orally explained by the experts; they are cross-examined, and subjected to subtle questionings, and are often unfairly handled by unscrupulous advocates; but from this fiery ordeal a honest expert comes free from any imputation of dishonesty. If this course were pursued in our courts it would be a decided improvement; there would be much less of that lax and ill-digested evidence which too often dishonours Medical testimony, and renders its influence nugatory."

The *Diario Romano*, published under the auspices of the Pontifical Government, contains some interesting Medical information, which may prove as useful, and more harmless, than some other of the spiritual delusions of the day. We are informed that St. Sebastian and St. Roch are excellent advocates against the plague. St. Erasmus is possessed of great efficacy for rheumatic pains. The specialty of St. Liboire is cases of stone, who, in this matter, is capable of teaching the most skilful of Surgeons. Had the King of the Belgians resorted to this saint, the cares of Mr. Thompson might well have been dispensed with. St. Trophime is a curer of the gout, and St. Martha should be consulted in all epidemic visitations. St. Treve preserves from the effects of lightning, and St. Bonose is possessed of the most extraordinary remedies for the small-pox.

In Belgium, as in other countries, the inroads of quackery and charlatanism upon the rights of the Profession have been seriously felt, and attempts have in vain been made to obtain protective laws. Charlatanism seeming, indeed, to be on the increase—working on public credulity in the most barefaced way—the Belgian Practitioners believe that their only remedy lies in rendering each other mutual support, by the agency of an association which shall unite the various local societies into one strong organisation. Something of this kind has been done by the Medical association in France, and considerable advantage seems to have resulted;—a great, united body possessing a power of action, and an influence unattainable by isolated individuals or small societies. Its object is not so much scientific culture and pleasant meetings as it is the protection of the material interests so seriously assailed by every means which are legally available.

The danger and inconvenience of consanguineous marriages have excited much attention of late, and have formed the subject of several communications to the French Academies. The last of these, intended to confute the generally received opinion, is from the pen of M. Seguin, who details the results of ten such alliances which have taken place between his own family and that of the Mongolfiers. Two of these alliances only have taken place between uncle and niece, the eight others being between cousins-german. The issues of these marriages have produced 61 children, of which number 46 are living in 1863, their united ages amounting to 1845 years. None of these have furnished examples of deaf-dumbness, or any of the other infirmities attributed to close alliances. It is to be observed, however, that the last marriage, contracted in 1858, has not proved fertile. It is obvious that an instance like that of these two families can at most be regarded as negative and exceptional.

M. Le Verrier, the astronomer, states that it is a mistake to say that the present summer is one of the hottest that has been known in Paris. In 1857 it was much hotter. The thermometer in the shade, and protected from all reverberation, has never risen higher this year at Paris than 35° Centigrade (95° F.), while in 1857 it rose to 38° (101° F.) What has rendered the temperature so insupportable is that on a given day the thermometer, which the evening before stood at 30° (86°), rose to 35°. The really remarkable thing this year is the continuance of its dryness. Everything, says M. Le Verrier, is so dry that the rain cannot fall. There is a great power of absorption, and the vapours absorbed, as soon as they are formed, cannot condense. During eight or ten days the wind has blown from the south-west without any rain. The telegrams from all parts of Europe indicate only a very moderate barometrical depression, and that only at the North Sea, the North of Holland, and Ireland.

FRENCH RESEARCHES IN ANTHROPOLOGY.

The second number of the *Anthropological Review*, a journal published by the Anthropological Society of London, contains a translation of an admirable address delivered by M. Paul Broca at the anniversary meeting of the Parisian Anthropological Society, in which he gives an able summary of the results obtained during the past ten years by French inquirers into the natural history of Man. Amongst the many matters of interest touched on by M. Broca, the researches of Pruner-Bey on the ancient races of Egypt are not the least curious. The monumental paintings of the ancient Egyptians afford no evidence of uniformity in their craniological conformation, but would rather indicate frequent intermixture with various peoples of Africa, Asia, and even of Europe. From a study of the most ancient paintings and mummies, M. Pruner-Bey has come to the conclusion that there were two distinct types in Egyptian population at the commencement of the historical period. One he designates the *type fin*, the other the *type grossier*. Specimens of these two types are to be found in the present day among the Copts and Fellahs, and although they have been undoubtedly derived from two sources, the period of their first intermixture preceded all historical record. The people of the gross type are regarded by Pruner-Bey as the original possessors of the Valley of the Nile; those of the fine type, on the other hand, whose work was the earliest civilisation developed by Man, came from a foreign country. Whence was their origin? He believes that they were neither Aryan nor Semitic, as might be supposed. Their crania are not analogous to those of Asiatic races, and there are radical differences between their language and those of Indo-European or Syro-Arabian stock. Baffled in the Orient, he turns to the Occident, and there from amongst the Berbers of

Northern Africa he derives the people who first lit the torch of civilisation, arts, and science. He finds a complete resemblance in conformation between the fine race and the Lybian or Berber, and he has obtained evidence to himself conclusive of a strict parentage between the ancient Copt and Berber languages. He believes, however, that the civilisation of which this Berber race were the parents was not imported by them into Egypt, but was born in the valley of the Nile.

The primitive population of Europe, the people of the stone period, are believed on good ground to have been brachycephalic. Numerous proofs of this have been obtained in Denmark, the British Isles, France, and Switzerland; on the other hand, the successise waves of Indo-European stock who subjugated them were long-headed, or dolicho-cephalous. The Celts, the Kymris, the Germans, and the Romans, although in less degree, were all dolicho-cephali; intermingled together, the two races are no longer to be distinguished; but in some localities better defended by nature, in valleys protected by their inaccessibility from the conquerors, the ancient type is yet preserved. Such are the valleys of the Rhœatian Alps, where, according to M. de Baer, the people are still brachycephalous, having preserved their type unmixed. But the most ancient language of Europe is undoubtedly the Basque; it alone has survived the wreck of primitive idioms, and it therefore becomes a most interesting point to determine the type of Basque crania. This has now been done. Sixty Basque skulls have been placed in the museum of the Parisian Society, and curious as it may seem, subversive, indeed, of all preconceived ideas of what the Basque type ought to be, three only of the sixty are really brachycephalous, most of them are dolicho-cephalous, and the mean type is more dolicho-cephalous than are the French of the north.

The ethnology of modern France has received valuable illustration from the Medical Geography of M. Boudin. The statistics of conscription for the Army have enabled M. Boudin to frame ethnological tables and maps, which, as M. Broca observes, have reproduced for France the Ethnological Gaul of Cæsar's "Commentaries." Recruiting has shown not only the prevalence of peculiarities of stature and conformation in particular districts, but it has demonstrated the influence which race has on disease. The maps of M. Boudin prove that the distribution of myopia, rupture, and bad teeth, depends greatly upon race. In these respects between the populations of Brittany and Normandy, there is the greatest difference, and, according to the statistics of M. Bertillon, the two populations, so separate in origin, occupy the two extremes in the scale of mortality in France. The question of the cerebral differences between Man and the Anthropoid Apes is, according to Gratiolet, to be answered by embryology and morbid anatomy. Gratiolet finds that the order in which the convolutions develop themselves is absolutely different in the two groups. The convolutions which in man appear first, are in the ape formed last, and *vice versâ*. It follows that when in a child there is any arrest of development of brain, that organ, so far from approaching the Simian conformation, differs from it more and more.

M. Broca's remarks on the bearing of the recent discovery of the geological antiquity of Man on the monogenistic and polygenistic theories of his origin, will doubtless embody the conclusions at which many of our readers have arrived:—

"When it was believed that humanity was quite recent, and scarcely six thousand years old; when in the valley of the Nile upon monuments forty centuries old there were found represented ethnic types as distinct then as they are now—Jews, Greeks, Egyptians, Hindoos, and Negroes, entirely like their present representatives—it might have been expected that the day would arrive when the question of the multiplicity of primitive types would be solved. But at this moment the date of the first appearance of man seems indefinitely remote; the periods are no longer counted by hundreds or thousands, but by myriads of years, and we know that our five thousand years of history are but a short episode in the life of humanity. The types which we are enabled to study appear to us permanent. Can we say that they are so? The four thousand years which have elapsed since the ethnic types have been depicted on the Egyptian monuments may have produced in the corresponding races changes too slight to strike our attention, equivalent, for instance, to the tenth part of such which constitute for us race characters. But multiply this lapse of time by ten, and there will appear before us, I do not say demonstrated or demonstrable, but simply as possible, a conciliation of the monogenistic theory with most of the facts upon which the opposite theory rests."

M. Broca's eloquent and varied address, together with the publication of the English Soceity in which it has appeared, are well worthy the attention of all who hold in its full significance that the "proper study of mankind is Man."

A SURGICAL VISIT TO ENGLAND.

By M. COURTY.

M. Courty has addressed to a friend some letters giving his impressions during his recent visit to this country. We gave an extract from one of these in our last "Week," but a somewhat fuller account of the observations of our intelligent *confrère* has been thought desirable:—

"The little time I had at my disposal did not allow of my studying the methods and procedures of English Surgery in a thorough manner, and I resolved to limit my inquiries to those points which relate to my own special studies on diseases of the uterus. I find, on my return, that all my notes bear upon the treatment of these and the Surgical operations practicable upon women. Among these operations, there is one which ranks before all the others, its gravity conferring upon it the highest degree of importance. I allude to ovariotomy, so recently imported into France, and so differently judged of by our most competent authorities, which well deserves the trouble of being examined near enough to enable a trustworthy opinion to be formed of it.

"Before visiting our *confrères* on the other side the Channel, and being present at their operations, we must first reach England, and traverse that town without bounds which is called London. I am not about to commence with a lesson in geography, but I wish to indulge in a philosophical reflection, which, if not very deep, is at all events of importance to bear in mind when about to pass judgment on English Surgery. The mind of a people is everywhere revealed; and it is nowise surprising that the same breath should inspire its conceptions or animate its actions both in the numerous branches of a science, and in the various arts which are the result of its applications. Well, neighbours and allies as we are of the English, I will cheerfully even say friends (for we cannot see them close without feeling disposed sincerely to like them), we must at once acknowledge that, right or wrong, they seem to entirely differ from ourselves. Whether this depends upon climate, political institutions, or peculiarity of race, I know not, but it is a fact, and it is essential that such difference should be signalised. I am not now speaking of their Government, their political and social life, or their faculty for colonisation, although there is in all these points a profound, not to say radical difference. Without allowing ourselves to be drawn into the slippery ground of political discussion, where there is a risk of these questions engaging us in spite of ourselves, we may be permitted to contrast their *self-government*, their individual and public liberty, their power of initiation and confidence in themselves, their bold and enterprising spirit, their firmness and perseverance, with qualities of quite another character which are peculiar to ourselves.

"Confining ourselves to mere differences in custom, and to only some of these, let us observe the English in the street, when at business, and when at home. In the street, as well as at business, they act more than they talk. This is not that they do not reflect, but they think rapidly and decide promptly. They seem to run rather than walk, and their carriages dash along the streets. Indeed, these no longer suffice, and the railways are invading the centre of London. Above and before all there is action and progress; but action which is confident in itself, and the spring or lever of which has not to be sought for from without. To see the English at home you must penetrate these block-houses,—I mean these houses, each of which, separated from the street by a strong railing and a deep trench, resembles a little fortress. You will then appreciate this interior, this famous home, in which private life secludes itself from the unknown and the importunate. Here all is designed for comfort and repose, just as out of doors all is for activity and movement. And in other things what a difference from our own usages! Their coachmen keep the left hand in place of the right; their windows open upwards instead of in the middle; their furniture is solid in place of being elegant; their tables are square, not round. They feed on roast meats instead of sauces, and eat their salads not with their meat, but with their cheese. They drink their champagne during dinner, and their Bordeaux at the dessert. In counting their fingers, they begin with the index finger in place of the thumb, etc. In fact, a volume might be written on such matters.

"But let us return to Surgery; we have not been wandering, however, so far as might be supposed, for here we have differences again; and first, in the employment of time, the day of the English Surgeon entirely differs from our own. We pay our Hospital visits in the morning, after which come our private patients, the afternoons being reserved for consultations at home; our *confrères* receive their patients at home from eleven to one o'clock; after lunch comes the Hospital visits, and it is only then, *i.e.*, from two to four o'clock, that we can meet with these gentlemen in their wards, or at their operations; then come their visits to private patients. Perhaps the difference would not have struck me so much had it not given rise to a serious loss of the little time which I had to devote to London, and it will be easily understood that not being able to employ my morning hours in the Hospitals, as in our French fashion, I felt a little annoyance at these British customs which caused me the loss of so many precious instants.

"These differences, after all, are but superficial, and may be dependent upon the manners of the country or upon a too rigorous climate, or a sky too loaded with fogs to allow of morning visits being made. What is of more importance is the difference of the Hospitals themselves and in the Surgical mind of the eminent men who are placed at the head of these. Not having seen all, I cannot tell all; but this is what I have observed. Besides the large Hospitals, which I have but little visited, there is a multitude of small ones, the like of which we have not in France. You are aware also that both the one and the other are private institutions, regulated by their own laws, and depending only on themselves. The thing which first strikes one in these small Hospitals is the little appearance they make. No expensive plans have been adopted, and no architectural displays have been attempted, so that they look just like private houses—the English home or little fortress we have just been speaking about. But you no sooner cross the threshold than you recognise the comfort of these houses, the exterior having been evidently less regarded than the interior. Even within no luxury prevails, but everywhere the most exquisite cleanliness. Perfect ventilation is secured at a small cost by means of the large fireplace and the ease with which the windows may be lowered from the top at pleasure. The rooms contain from four to twelve small, simple beds, the floors and walls being kept very clean. On these latter, side by side with some pious texts, inculcating courage and resignation, are suspended coloured engravings, imitating water-colours, which are an eminently national taste, often representing country scenes upon which the patients may agreeably rest the eye, and cheer up their painful solitude. But above all, there are none of those sickly, sour, nauseous odours engendered by charpie impregnated with pus, the detention of cataplasms, the exhalations of privies, and the miasmata of large, ill-ventilated wards, which, even without seeing it, suffice in several of our large establishments to indicate the insalubrious air of a Hospital. It remains for me to point out, together with these differences thus summarily mentioned, some which characterise the spirit itself of English Surgery. It is here, especially, that we see revealed the general spirit of the nation, that feeling which impels it not towards mere change—for few are so constant as the English, whether in their customs or their Surgery (as is seen by their old-standing predilection for union by the first intention)—but towards progress, or rather towards action. English Surgery, indeed, appears to me eminently active, and, consequently enterprising and bold, if not in all ways, at least in certain directions. Patients and Surgeons alike participate in this impulse, and certainly we find in France on the part of the former a resistance which is not met with in England. The patient wishes to be rid of his infirmity, as for him it would seem to live is not merely to exist, but to act. Every impediment to action is insupportable, and he does not hesitate to brave the hazards of Surgery for the sake of the chance of reconquering the free possession of himself.

"You will at once see that in this digression on the differences between the spirit, manners, and habits of ordinary life, and of Surgery in England and France, I only adduce some examples, pen in hand. I do not say that all differs in the two countries, or that Surgery is practised on different principles; but it is impossible that differences so numerous and so marked should prevail in the social organisation of the two countries, and in a thousand details of their private life, without these casting their reflection on the conception of a science, especially a science like Medicine, the certainty of which is only relative, and on the rules or practices of an art which admits of so many modifications as Surgery. Therefore, in order to judge impartially of the true value of Surgery, as of all other things, in Great Britain, we must divest ourselves a little of what there may be, so to speak, national in our science and our art. We must become penetrated with the spirit of the English, place ourselves in the midst of them, and look from their point of view. I must observe, moreover, that in so large a town as London, with its highly advanced civilisation, the taste and necessity for specialties are still more developed than in Paris, and that the men who cultivate these with so enterprising a spirit necessarily carry them to limits with which we are not familiar. If I do not deceive myself these reflections upon the differences of the scientific spirit of the two nations—on the disposition to activity, the enterprising character of the English patients as well as Surgeons, and the enforced development of specialties among them—will aid in explaining the sensible differences which distinguish English and French Surgery, in comprehending that there is more courage than temerity in undertaking great operations such as ovariotomy, and in explaining the success which has crowned this praiseworthy boldness.

"You will now gradually have perceived how, by placing oneself in the position of the English, one ends by finding quite natural attempts on their part, which we might before have been tempted to consider as Surgical eccentricities. I shall endeavour as I go along to call to mind other peculiarities in British Surgery, interpreting them from this point of view. At present I have no other design than to point out how it is that they have become so soon familiarised in England with an operation, which from its singularity as much as from its danger, has been so long regarded in France as not to be undertaken. I begin by declaring my sympathy for this operation and my esteem for those eminent men who have brought it within the domain of Surgery, less on account of their bold initiative than the deep knowledge with which they have regulated its execution. This contemporary conquest, like that of the cure of vesico-vaginal fistula, resections of bone, and some other recent operations, is certainly due to the more and more precise knowledge of the laws of pathological physiology, and to the more rigorous application of the law of union by the first intention. If the English School is proud of this method of healing all wounds, and especially those which ensue on great operations, and of which, since the time of Hunter, it has made a rule without exception, the School of Montpellier may justly pride itself also of having made of this method a fundamental dogma in its Surgical practice. While Roux, notwithstanding his visit to England, Larrey, Dupuytren, and the School of Paris (which has erroneously been regarded as alone representing the French School) declared it as unsuitable as a general and absolute method of treating wounds, and especially those made by amputation; the Montpellier School, on the other hand, defended it ardently in the writings of Delpech, Serre, Estor, and many others, and laboured at its perfection, in order to generalise its employment and ensure its success. Now, if ovariotomy be successful at the present time, as also the operation for vesico-vaginal fistula by the American method, this has assuredly resulted because for their execution procedures have been adopted which are but the logical application of known scientific principles that have been too long neglected. These procedures have been rigorously pursued, and success has been the result.

"You will thus easily understand the interest which this operation presented for me (not only as a precious Surgical individuality, if I may so express myself, but as a demonstration of the truth, and a justification of the rigour, of our principles), which has gradually raised itself to the height of an imposing witness in favour of one of the dearest dogmas of our School. Moreover, to the interest caused by the renown which this operation has recently acquired, to the conviction that it was practised on a large scale by men of consideration in England, there was added, to inspire me with a strong desire to study it more closely, a consideration, the weight of which was well calculated to decide the balance in favour of my project. This was the fact that ovariotomy had been imported into France, not by some suspected stranger or operator devoid of credit, but by a Surgeon whose prudence is proverbial, and whose wisdom is guaranteed by the habit of success."

M. Courty, during his ten days' residence in London, was fortunate enough to see ovariotomy performed six times, four times by Mr. Spencer Wells, once by Dr. Tyler Smith, and once by Mr. Baker Brown. He gives minute details of these respective operations, which will be of great interest to his French correspondent, but with which our own readers are sufficiently familiar.

REVIEWS.

Studies in Physiology and Medicine. By the late ROBERT JAMES GRAVES, F.R.S., Professor of the Institutes of Medicine in the School of Physic in Ireland. Edited by WILLIAM STOKES, Regius Professor of Physic in the University of Dublin. 8vo. Pp. 428. London: John Churchill and Sons. 1863.

THIS is one of those few works to which unqualified praise may without hesitation be awarded. Even if its literary merits were less than they actually are, it would deserve commendation as a touching "*in memoriam*" offered by one distinguished man to another. At the commencement of a biographical memoir of Graves with which the work opens, Dr. Stokes says:—"Ten years have elapsed since the death of the author of 'Clinical Medicine,' and now in attempting to give a sketch of the life and works of him who was once his teacher, then his colleague, ever his friend, the writer but obeys the promptings of a desire which has long been present to him, that the members of his Profession should have a more intimate knowledge of one who was so worthy of being enrolled among the benefactors of Medicine." The tone in which the narrative is carried on fully bears out its beginning; for while it is impressed throughout with a deep sadness, and with undisguised regret, it ever maintains a simple and manly dignity, alike removed from maudlin sorrow as from the "excessive eulogium" which is spoken of as a besetting sin of such compositions. The eighty pages devoted to "the Life and Labours of Graves" have afforded us the liveliest gratification, not unmixed with emotion; and we recommend them warmly to all classes of readers.

Robert Graves, third son of the author of "Lectures on the Pentateuch," afterwards Dean of Ardagh, after taking high University honours, obtained his diploma in 1818. He then studied in London, France, Italy, Germany, and lastly in Edinburgh, before returning to Dublin. On his travels he made the acquaintance of Turner the painter, and was one of the few men in whose company that eccentric genius is known to have worked. His skill in acquiring languages gave a special value to the letters which he sent from abroad with the arrangement that they should be circulated among his friends.

In 1821, he at once took a leading position in the Irish capital. As one of the founders of the new school of medicine in Park-street, and also as Physician to the Meath Hospital, he commenced a system of clinical observation and instruction which has done much for Irish medicine. Here he afterwards delivered the lectures on clinical medicine which have rendered his name famous. Dr. Stokes calls attention specially to the two great subjects of cholera and fever as there set forth, and to his proposition for the establishment of "Medical observatories."

The employment of food and stimulants in fever, even from its earliest periods, is mentioned as his first and foremost contribution to therapeutical knowledge; his own estimate of its importance being gathered from a jocose desire that his epitaph should consist of the three words—"He Fed Fevers." But, besides this, his biographer enumerates no less than eleven other subjects in which he added to our store of facts, or held views distinctly in advance of his contemporaries.

After noticing his warm advocacy of the claims of the Dispensary Surgeons and Physicians throughout the country during the disastrous epidemic of 1847 and 1848, Dr. Stokes proceeds to quote a letter from Professor Trousseau, addressed to the French translator of the "Clinical Medicine," which appears as a preface to that work. As this is extracted verbatim from this journal, we need only remind our readers of the high esteem in which its author is held by one of the most distinguished of French Physicians.

Graves's labours in subjects not purely scientific are next adverted to, such as his interest in the Hungarian revolution and in the Affghanistan campaign. Some of the letters are quoted which we have already named as intended for circulation among his friends, and therefore open to publication, affording a vivid picture of his style and thoughts, without unfair violation of literary privacy.

In the autumn of 1852, he being then in his fifty-seventh year, symptoms of the malady which was to prove fatal showed themselves. He died on the 20th of the following March—in the words of an epitaph which he himself dictated—"After a protracted and painful disease, in the love of God, and in the faith of Jesus Christ." So ends this affecting biography.

The thirty-two essays, which form the bulk of the work, are on subjects Physiological and Medical, as stated in the title. Twenty of them are introduced as belonging to the former class, and the twelve remaining under the general category of Miscellaneous. It is, moreover, mentioned in the editor's preface that they have been selected out of many which from time to time appeared in various periodicals. "It is hardly necessary," adds Dr. Stokes, "to say that this book is not to be taken as setting forth the state of physiology in our time. But these remains of Graves have an especial value, as showing how the mind of a great Physician dealt with Physiology in its true relations to Medicine."

Space forbids our entering into particulars as to all the essays; and, indeed, many of them do not require it from the simplicity and transparency of their respective titles. "The Ubiquity of Life," "The Position of Man in the Scale of Life," and "The Influence of Light," are subjects at once comprehensible, and incapable of condensation. Phosphorescence and Electricity, in relation to plants and animals, are, perhaps, somewhat behind modern researches, whereas the article on Latent Life and on Vital Crystallisation is, in some respects, very far in advance of the period at which it was written. The latter characteristic is, however, most remarkably shown in the discussion of the Laws of Periodicity, the Sense of Touch, the Functions of the Lymphatic System, and the Use of the Cochlea in the Organ of Hearing. It is apparently with a view to some such chronological analysis as this that the date of each paper is appended to it in the table of contents. The year first recorded is 1834, while two of the most practical essays in the book, namely, on "Preventing Evaporation from Water-tanks in Hot Climates," and "On the Progress and Contagion of Asiatic Cholera," bear the date of 1850, only two years before the fatal illness which removed our author from undiminished labours, and from researches still bearing the stamp of vigour and originality.

The miscellaneous essays open with one of the longest in the work, a review of a publication by Dr. Oppenheim on the "State of Medicine in Turkey." Among many highly interesting facts we may notice an account of the "Haman," or Turkish bath, which has since become so familiar both to the Profession and to the public. Dr. Graves's acumen clearly distinguished cases where this powerful remedy might be of real service, though its excessive employment was, at the time of writing, still a thing of the future.

An amusing commentary on some recent Medical trials is afforded by the following passage, which is after the fashion of Voltaire's "Candide" or "Zadig," and exhibits the writer in one of his lighter moods:—

"The sick Turk makes promises, the convalescent Turk breaks them. In consequence of this disposition, the Physician is often obliged to draw up a specific contract in writing, and according to a legal form, before he undertakes the treatment of a case, or the performance of an operation. The contract is deposited in the hands of a magistrate, who can enforce payment, and whose zeal in the discharge of this duty is quickened by the legal fee of 10 per cent. to be deducted from the stipulated sum. It is not very rare, however, for the patient to evade the ends of justice by paying the magistrate 20 per cent.; when this is done the Physician's contract often proves but waste paper. These contracts, however, in general afford the Physician tolerable security."

A notice of Dr. Pommer's experiments as to the effects of intoxication on graminivorous and carnivorous animals, a list of birth-days of celebrated living authors, and the note on evaporation already spoken of, lead to an essay on the hock-joint of the horse, which appeared in the *Transactions* of the Royal Irish Academy. This is an admirable study in animal mechanics, proving the peculiar anatomical structure to be evidently connected with the power the horse possesses of sleeping in the standing position. A similar communication to the same august body, on the structure of the vertebræ of the Delphinus Diodon, is followed by a quaint and learned notice of some affections of the hair, in which Euripides, Appian, and Strabo are laid under contribution.

The paper upon the influence of the waters of the Dead Sea and of the great Salt Lake of America on animal life is remarkable, as entirely upsetting the common notion of the barrenness and destitution visible around the former; the poetical, but untrustworthy statements of Warburton, Kinglake, and other travellers being in many instances disproved from their own unconscious testimony.

A long and important communication on the progress and contagion of Asiatic cholera is occupied with enforcing views already propounded in the "Clinical Medicine" on the notice of Government. The book concludes with a discussion of Liebig's theories on animal heat and disease, leading the writer to express his estimate of the influence of clinical teaching. It takes the form almost of a confession of faith,—not the only one in the volume,—in which, with an earnestness unsurpassed, and a deep sense of moral responsibility, his great and good man sums up his duties and aspirations.

"In truth," he says, "the British teacher of practical Medicine exercises an influence without parallel in importance and extent, and his opportunities of benefiting or injuring his fellow-men are incalculably great. If he works with zeal and diligence, if he labours conscientiously and perseveringly in performing the important task he has undertaken, a compensation awaits him to which scarcely any member of any Profession can attain. Can any reward exceed in value the reflection that he has assisted in imparting practical knowledge to multitudes of enterprising young men, who year after year leave our Hospitals to engage in the sacred duties of the Medical Profession throughout the world. Can man enjoy a purer, prouder, more gratifying reflection? When I hear that a favourite pupil, who acquired a solid stock of practical knowledge in our Hospital, has settled in any particular town or district, I cannot help feeling on the part of my colleagues and myself that we have been the humble means of conferring a blessing on the people entrusted to his care; and I cannot refrain from congratulating myself upon holding a situation which multiplies a thousand-fold our efforts to be useful, and enables us to stretch forth our hands to heal men of all nations and all languages. The hero and the despot may extend a sovereignty over distant regions—may dispense honours and rewards, or inflict punishment and death—but they cannot chase away pain; they cannot bid the burning thirst to cease, or give back repose to the sleepless; they cannot impart feeling or motion to the paralysed, or sight to the blind; and, above all, they cannot imitate that almost godlike function of the healing art by which man is enabled to recall to his fellow-man reason long banished, and restore to society the hapless victim of insanity."

THE SURGEON AND THE COURTIER.—The details of that terrible death-bed (Louis XV.'s) are universally familiar: one story, however, may be worth recording. It is a scene enacted between the Duc de Villequier, first gentleman of the chamber, and Mons. Androuillé, the head Surgeon to the court. The king's disease (malignant small-pox), it will be remembered, rendered it almost certain death to go near him. The duke thereupon politely suggested to the doctor that it was his duty to open and embalm the body. The doctor professed his alacrity for the task, but he added: "Pendant que j'opérerai, vous tiendrez la tête; votre charge vous y oblige." The duke said not a word; and Louis the Fifteenth, it is perhaps superfluous to state, was buried unopened and unembalmed. —From the *National Review*, July, 1863.

FOREIGN CORRESPONDENCE.

THE THIRTIETH SCIENTIFIC CONGRESS OF FRANCE,

HELD AT CHAMBERY, SAVOY.

(From our Correspondent.)

CHAMBERY, August 18.

A SCIENTIFIC body, termed "The Institute of the Provinces of France," serves the purpose of keeping up a connection between the various learned societies of the French towns, and thereby in some degree counterbalances the preponderating influence of the great metropolis. It holds a meeting annually in some large town, very much after the plan of the British Association for the Advancement of Science. Above 500 "members of the Congress" were registered up to Saturday, the 15th, the Congress having commenced on the 10th, when Dr. Roux, of Marseilles, was elected President. As with scientific societies in general, so with this, the "doctors" mustered well. A few ladies have accompanied their husbands to the Congress, and the feminine rank and fashion of Chambery graced the general meetings with their presence. Although religion and politics are expressly excluded from the Congress, the meeting at Chambery had somewhat of a political character, being intended to celebrate the union of France and Savoy. That union was consequently often mentioned in terms of praise, which, however, had too official a tone to my ears to be genuine; and when "The Union" was toasted, at a dinner of 200 of the members, the applause was by no means enthusiastic, while hisses were audible. The weather has been very hot (rising to 98°) so that the movements of the ladies' fans at the general meetings were incessant.

The arrangement of the Sections differs from that of the British peripatetics, and is, I think, more logical. Sections I. and VI. were united into one, which included the Mathematical, Physical, and Natural History Sciences; Section II. included Agriculture, Industry, Commerce; Section III., the Medical Sciences; Section IV., History and Archæology; Section V., the Fine Arts, Literature, and Philosophy. I do not know why our British Association excludes the science of the Fine Arts, or of History, or of Archæology. It is true something of these matters creeps into the sections of Ethnology and Natural History, but it is always in a halting way. The "Congrès Scientifique" is also better managed in fixing beforehand what questions may be usefully discussed, as for example, in Sections I. and VI. the first question is a local one,—to describe the ancient surfaces and constituents of the Alps. A second is to give in a tabular form the principal mineral waters of Savoy. Then we have the other useful products of Savoy, metals, combustibles, quarries, Flora, vegetable products, and fauna. In Section II. the question was raised, whether it is more profitable, and under what circumstances, to produce wine, or flesh-food, or cereals in Savoy? Nor was the question of pisciculture in the numerous lakes overlooked. In the Medical Section (III.) hygienic and Medico-political questions had a predominance. Cretinism and its causes, cemeteries, marshes, Medical education in the provincial schools, hydrology, or the science and therapeutics of mineral waters, the true business and position of entozoa, and, finally, whether the tariff of payments to experts in Savoy in Medico-legal investigations is ample enough, considering the character of the country, and the difficulties it throws in the way of speedy travelling. I could not learn what is the scale of payment complained of, but I was told that two francs, or 20d., is the Physician's fee for a visit at Chambery. It was very clear the opportunity was diligently seized to make public the grievances of the Profession. Thus the monopoly which the Government grants to certain Physicians as inspectors of the various mineral waters is one of these. In answer to the question, "What is the influence of the existing organisation upon the material prosperity of the place, on the position of the Profession generally of the immediate neighbourhood, and on the progress of hydrology?" the conclusion arrived at, after a warm discussion, was, that the whole system was worse than useless, and that Government should be memorialised in favour of entire freedom of practice. How far the Government can or will do this is very doubtful. The interference with the baths is only a part of a huge bureaucratic system which manages everything, even to the Government itself. Another subject which the Medical Section discussed long and warmly was the freedom of Medical teaching. Paris swallows up everything of value. At Lyons, so populous and rich, there are only eighty students in the Medical Schools. I was told, however, that there was a marked diminution in the number of Medical students throughout the whole of France; the numbers are already too great and the pay so small.

The Professional and higher clergy take a very active part in the meeting, and number about forty of a total of 500 members. A great moving spirit in the enterprise is the Cardinal Billiet, Archbishop of Chambery, a vigorous old man, who really seems to be a model prelate. He is a first-rate geologist and naturalist, has taken much interest in sanitary matters, and especially in the cause of cretinism, and has made science popular in his diocese amongst both clergy and laymen. At the opening of the Congress on the 10th, although in his eighty-fourth year, he performed high mass in the cathedral, and had the Abbé Martin, Vicar of Geneva, to preach afterwards, which he did from the text, "Deus scientiarum est dominus." He showed, in a highly-eloquent and philosophic strain, that the union of science and religion is indispensable for the success of both. And I may add, that during the discussion in the Medical Section on marshes and marsh fevers, the Cardinal's Vicar spoke with great good sense and good taste.

I looked into the Hôtel Dieu early one morning, and went round the Medical wards with Dr. Denorié, one of the Physicians. About a fourth of all the cases admitted are intermittents, chiefly tertians, two cases of gastric fever, and three or four of dysentery. The latter was attributed, according to the old doctrine, to the fruit which the people eat—pears, grapes, and peaches to wit—but a surer cause is in the fæcal gases which fill the atmosphere most unpleasantly during this hot weather. The principal streets are well paved and remarkably clean, but there are blind, narrow alleys off them, reminding you of the wynds or closes of Edinburgh, as well by the height of the houses and the common stairs as by the stenches therein. There are marshes and marshy land, also, in various directions around, giving rise to (rarely) grave forms of intermittents, and intensifying the contagious fevers. There were in the females' ward two cases of goître, both from a marshy district near to Chambery. One of them was also a cretin, aged 20, deaf and dumb, with the frog-like face, the stunted growth, and the stupid look of the true cretin. The discussions on the causes, prevention, and cure of cretinism were repeatedly adjourned and were warmly kept up. Dr. Morel, of St. Yon, near Rouen, who is a leading authority on the nature and causes of these degenerations, took an active part in them. He also read an interesting paper on a group of cretins he had observed in the valley of the Seine, not far from Rouen. I do not think anything new as to the special and essential causes of cretinism was elicited. It was admitted by all that it is the result of bad hygienic conditions; but how they produced goître, and how cretinism, and how the hereditary tendency to idiocy followed upon goître in the mother or father were not so clearly shown. The great defect of the discussion was that it dealt with generalities, which were true enough practically, but as vague pathologically. The conclusion finally come to was, that Government should be recommended to appoint a commission of experts with a view to the establishment and supervision of schools and asylums for cretins, and also for the removal of the known causes from the infected districts, and which are somewhat extensive in France. There can be no doubt such a measure would be reproductive, in not only improving the health and vigour of a numerous population, but also adding to the value of the land.

The mineral waters of Savoy are numerous and varied as to their constituents, and the various towns which have grown up around these compete vigorously with each other. The chief of them is Aix le Baines, near to Chambery, celebrated for its sulphurous thermal waters, and the Bath and Buxton of this part of the Continent. They were in high repute in the time of the Roman dominion, as is proved by the imposing remains of Roman architecture. Every possible kind of bath is provided in the handsome new building just finishing, as well as treatment by inhalation and "pulverisation." No gambling is allowed, but a handsome casino provides every kind of in-door amusement, and the adjoining lake (Bourget) has a steamer plying on it, and a little fleet of pleasure-boats. Dr. le Baron Despine, who is the honorary inspector of the baths, is a gentlemanly person, and speaks English very well. Any English Practitioner travelling this way would do well to give him a call. And I may add, as a useful fact, that foreign Medical Practitioners can have the use of the baths without any charge, except a small gratuity to the attendant. Aix has no important chalybeate water, but at La Bouche, about twenty miles distant, a very important and valuable spring has been lately discovered, which is bottled and sent to Aix. Curiously enough, when search was made for the source of this spring, they accidentally dug down upon a place where were the ruins of a former building, and evidently Roman, the existence of which was never suspected.

Amongst the purely Medical matters discussed was a new method of instrumental delivery, invented by Dr. Chassagny, of Lyons. It is not possible to describe the instrument, but the principle is good. By an ingenious contrivance he fixes the blades of a long forceps to the head of the child sufficiently firmly to prevent them slipping. Then, by means of soft cords attached to each blade, he makes traction on both the forceps and the head of the child, so that the handles are only used for fixing the blades, and not for holding them tight or extracting the child. The advantage is that the head and forceps (thus constituted one body) take the natural curves and course of the outlet, and so mischievous pressure of both mother and child is avoided. In Surgery there was a discussion on the treatment of hare-lip and its coincident defects. Professor Scoultetten was expected to read a paper, but did not make his appearance, although at Aix. The connection between goître and exophthalmia or "exorbitism," as some call it, was discussed, and Dr. Laycock's views as to the origin of the vascular thrill and cardiac palpitation in morbid heat had due attention. Dr. Gillebert Dharcourt, the director of a hydro-therapeutic establishment, stated that he had had remarkable success in treating the vascular bronchocele and orbital protrusion, and the other symptoms, by the application of cold douche and ice, using at the same time derivatives to the wrists, etc., to obviate any bad results. The same gentleman showed to a small party in the Cardinal Archbishop's Palace (of which the Cardinal himself made one) the influence of cold applied directly to a bat's wing, on the movement of the circulation in the capillaries, and which is manifestly very considerable. By an ingenious instrument he made ice-cold water circulate through a hollow ring of brass which was laid upon the wing of the animal; thermometers showed the temperature of the water at its entrance and exit; and the changes in the current of the circulation were demonstrated by the microscope.

In the other Sections there were some interesting discussions, especially archæological and anthropological. It is very curious to observe the great variety of forms of the head and face when a general meeting is held, for in the Medical Section the skulls are all nearly of the English type, and the Doctors themselves (about thirty) very like a similar assemblage in England. But when the craniological conformation is noted in the other sections this unity is not seen. A stalwart, old Abbé, of the regular John Bull type—dolicho-cephalic, huge in form and imposing in presence—the Abbé Sabatier, is seated by a young Abbé with a singularly perfect Mongolian cast of countenance and head, and the colour (a palish yellow) even of that race, yet he is a native of the district, and one of the best mineralogists of the day. Between these two extremes of the brachio- and dolicho-cephalic heads there was to be seen every degree of variety, nay, one head showed the sloping form of the ancient Peruvian.

There are the usual excursions for the amusement of the *savans*; one of these takes place to-day, and is to witness the boring of the Alps at Mount Cenis for the railway which is to connect France and Italy. There was one on Sunday to the Royal tombs of the House of Savoy, in a Benedictine monastery, founded by the late King on the shores of Lake Bourget, and afterwards the Congress went to see divers bring up articles formerly belonging to some ancient people that lived in a lacustrine town near Chatillon. When one looks at the well-marked Asiatic type of skull seen here and there amongst the people, the conclusion is not difficult that a modern skull might easily become imbedded amongst these lacustrine remains, and finally give rise to a long series of fallacious deductions. One of the two divers who swam about the boats might have passed very well for an ancient Peruvian.

After the business of the day was over, a dinner of the Congress was held in the casino at Aix. Two or three speeches were made and toasts given; two of the gentlemen toasted went up to the chairman, and, in return for the flattering things he had said of them, seized him by the neck and gave him two rousing kisses, first on one cheek, then the other. At the *déjeûner* in the morning, near the monastery, the health of the Marquis di Costa was proposed—a resident nobleman who takes a hearty and enlightened interest in the arts and sciences of Savoy. After the company rose, the Marquis kissed the chairman so warmly as to bring tears into his eyes. The French laugh at the English for many things, and justly as to some, but there are few English gentlemen who would manifest their esteem for after-dinner speeches and laudations in this enthusiastic but surely too feminine a manner. Count Arrivahene was kissed so terribly by his countrymen when he returned to Italy after years of exile in England, that he was obliged to tell them very plainly that he had learnt better in England. Manners differ; but if it be the gentlemanly thing to restrain your feelings of gratitude for what (it may be admitted) is deserved praise, then, I think, the Marquis might add this quality to the other excellences of his character with advantage.

The public authorities and literary circles of Chambery and Aix were not slow in showing their hospitable feelings but private individuals did not seem to think it necessary to exert themselves. It cannot be denied that the weight and importance of this French scientific body are not equal to those of its Britannic sister, but, *cela ne vaut rien*, as probably all its members are in happy ignorance of the fact. To-morrow is the close of the meeting, when Dr. Roux, the president, will (as he wittily remarked to me this morning) give the thirtieth Congrès Scientifique de France the *coup de merci*. It is a well-intentioned and useful institution, and should have as many thousands as it has hundreds of members if it were supported as it deserves to be. Like many other French products, its chief fault is its leanness.

GENERAL CORRESPONDENCE.

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A CASE OF INFANTICIDE.

LETTER FROM MR. MACKECHNIE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Your insertion of this case of infanticide will much oblige. I may remark that all, including the judge, were astonished at the verdict.

I am, &c.
D. MACKECHNIE,
Licentiate of the Faculty of Physicians and Surgeons of Glasgow.
Scarbro'-street, West Hartlepool, August 19.

On Saturday, March 28, 1863, I was requested by a Mr. Smith, of this place, to go directly and see his sister, Sarah Ann Smith, who was represented by him to be very ill. On arriving at his residence, I was ushered into a bedroom, where I found her standing on the floor in her every-day attire. She appeared to be unusually pale, but calm and collected. On inquiring what she complained of, she put her hand on the gastric region, and at the same time saying, "I have a pain here;" by this time I observed some drops of blood on the floor where she stood, which caused me to ask when she last menstruated; she replied about the end of July or beginning of August.

Tracing the drops of blood, I saw they led into two large patches in a corner of the room.

In answer to a question put by me, she said the blood came from her "bladder." One of the patches, besides blood, exhibited a whitish-looking substance similar to the vernix caseosa. Seeing this, I said to the girl, "Something has passed; where is it?" She pointed to a cupboard in a corner of the room, from which a common washhand-basin was taken, containing a placenta, membranes, and a portion of cord about nine inches in length, evidently cut and torn, the torn end corresponding to a slight cavity in the placenta.

I naturally inquired for the child. She then left the room, followed by the writer, crossed the landing at the top of the stairs, opened a small cupboard, took from it a bundle, and returned to the bedroom, placing it on the foot of her bed.

The bundle, on being opened, contained a child, having a great many wounds on its neck, throat, and abdomen. From the wounds on the neck and throat blood flowed very freely, even after being wiped several times. The child distinctly made three efforts to inspire during the time I was in the apartment. The second effort was violent, so much so, that the child curled himself up in a lump, causing that portion of bowel which protruded through the wound below the navel to protrude still further, and the face to exhibit signs of great agony. Being afraid that the girl might do herself some harm, I asked for the knife, which was handed to me by her in silence.

There was blood on it; the large blade had the appearance of having been wiped. It was a common two-bladed penknife.

I may mention here that her sister-in-law was in the room at this time, and saw the child show signs of life, which she swore to at the trial. The girl had made no preparation whatever for the birth of a child; indeed, she strongly denied being pregnant when the question was put to her by some of her relatives.

I was desired by the coroner to make a post-mortem examination of the body, at which I was kindly assisted by Dr. Kirk, of this place. The following was the result of that post-mortem examination:—

Report of Post-mortem Examination of a Male Child in Police-Station, West Hartlepool, on March 30, 1863. *Time,* 10·30 *a.m.*

Rigor mortis nearly gone; weight, 5 lbs. 6¼ ozs.; length, 17½ in.; circumference of head, 12 in.; hair lightish, and about half an inch in length; fontanells depressed; skin pale or bloodless; slight discoloration on right brow, about the middle of frontal bone. On neck and body twenty-two wounds—principally punctured—fifteen being situated on the right side of the neck, between the collar-bone, lower jaw, and ear. Between the sternum and the navel four penetrating wounds, through one of which a portion of intestine protruded. One wound, an inch from the umbilicus to the left, and on a line with it. Another directly below the navel, from which a considerable portion of intestine protruded. Above the pubes, and to the right of the symphysis, another wound. Nine inches of cord attached, and evidently cut.

Examination of Head.—On the right brow, under the scalp, a slight ecchymosis, corresponding with the external mark. Brain healthy; convolutions fairly developed.

Examination of Neck.—On laying bare the front part of the throat a considerable quantity of effused blood was apparent. On the cervical vertebræ and palate were several wounds corresponding with the external wounds. One wound through the soft parts, under the lower jaw, into the back part of the mouth, and dividing the soft palate to the left of the uvula. Another through the right tonsil. Three in pharynx. One through the upper and back part of the trachea. On spinal marrow of the neck a considerable effusion of blood. On the right side of the neck, between the transverse processes of the second and third vertebræ, a punctured wound, penetrating to the spinal cord, and dividing the transverse processes. One wound in the upper part of the body of second vertebra penetrating about a quarter of an inch; a second, a little lower down, penetrating into the canal; a third, in the body of the third vertebra, about a quarter of an inch deep; and another between the second and third vertebræ, on the left, separating the transverse processes.

Examination of Chest.—The lungs pinkish, and appear to have been fully inflated. On placing them along with the heart on distilled water they floated freely. The lungs were cut into thirty pieces, every one of which floated. On pressure being applied under water bubbles of air freely escaped. The heart firmly contracted, and perfectly empty.

Examination of Abdomen.—In the free margin of the liver several wounds, corresponding with the external wounds, and penetrating through the liver. Immediately under the puncture on the left side of the navel a wound in the larger bowel, allowing the meconium to escape. The same bowel also wounded opposite the puncture immediately under the navel. The wound in right groin penetrated through both sides of the bladder. The duodenum cut across near to the stomach. Both testicles in the scrotum.

The examination of the body terminated at 12·40 p.m.

The coroner's jury returned the following verdict:—"We find that the deceased child was born alive of the body of Sarah Ann Smith, and that she wilfully murdered it."

The case was tried at the Durham Summer Assizes, July, 1863, before Mr. Justice Blackburn.

In the charge to the Grand Jury, he said, "You are aware that in order to commit the crime of murder upon an infant it is necessary that the child should have an independent existence before the crime of murder has been committed. Very frequently, indeed, there occur cases where an infant has been killed shortly after birth; but I do not think, from the depositions, that there could have been any doubt about this, because the child was actually alive, delivered into the hands of the Surgeon, and died afterwards, leaving therefore no doubt that the child had an independent existence."

The Grand Jury found a true bill.

For the defence it was contended that the child had no separate existence, and that the wounds were inflicted while the mother was cutting the cord.

His Lordship, in summing up, stated that "if the child has an independent existence, and lives after birth, and dies in consequence of wounds wilfully inflicted during delivery and before independent existence, this is enough to constitute murder."

The jury returned a verdict of "Not Guilty" of either murder or concealment of birth, and stated that they were of opinion that the child had had no separate existence.

REPORTS OF SOCIETIES.

ROYAL SOCIETY.

THURSDAY, JUNE 18.

Major-General SABINE, President, in the Chair.

THE MOLECULAR MOBILITY OF GASES.

(Continued from page 211.)

Inter-Diffusion of Gases—Double Diffusion.—The diffusiometer was much improved in construction by Prof. Bunsen, from the application of a lever arrangement to raise and depress the tube in the mercurial trough. But the mass of stucco forming the porous plate in his instrument was too voluminous in my opinion, and, from being dried by heat, had probably detached itself from the walls of the glass tube. The result obtained of 3·4 for hydrogen, air being 1, is, I understand, no longer insisted upon by that illustrious Physicist. It is indeed curious that my old experiments generally rather exceeded than fell short of the theoretical number for hydrogen, $\sqrt{\frac{1}{0\cdot06926}} = 3\cdot7994$. With stucco as the material, the cavities in the porous plate form about one-fourth of its bulk, and affect sensibly the ratio in question, according as they are or are not included in the capacity of the instrument. Beginning the diffusion always with these cavities filled with hydrogen, the numbers now obtained with a stucco plate of 12 millims. in thickness, dried without heat, were 3·783, 3·8, and 3·739 when the volume of the cavities of stucco is added to the air and hydrogen, and 3·931, 3·949, and 3·883 when such addition is not made to these volumes. The graphite plate, on the other hand, being thin, and the volume of its pores too minute to require to be taken into account, its action is not attended with the same uncertainty. With a graphite plate of 2 millims. in thickness, the number for hydrogen into air was 3·876, and of hydrogen into oxygen 4·124, instead of 4. With a graphite plate of 1 millim. in thickness, hydrogen gave 3·993 to air 1. With a graphite plate of 0·5 millim. in thickness, the proportional number for hydrogen to air rose to 3·984, 4·068, and 4·067. A similar departure from the theoretical number was observed when hydrogen was diffused into oxygen or carbonic acid, instead of air. All these experiments were made over mercury and with dried gases. It appears that the numbers are most in accordance with theory when the graphite plate is thick, and the diffusion slow in consequence. If the diffusion be very rapid, as it is with the thin plates, something like a current is possibly formed in the channels of the graphite, taking the direction of the hydrogen and carrying back in mass a little air, or the slower gas, whatever it may be. I cannot account otherwise for the slight predominance which the lighter and faster gas appears always to acquire in diffusing through the porous septum.

Speculative Ideas respecting the Constitution of Matter.—It is conceivable that the various kinds of matter, now recognised as different elementary substances may possess one and the same ultimate or atomic molecule existing in different conditions of movement. The essential unity of matter is an hypothesis in harmony with the equal action of gravity upon all bodies. We know the anxiety with which this point was investigated by Newton, and the care he took to ascertain that every kind of substance, "metals, stones, woods, grain, salts, animal substances, etc.," are similarly accelerated in falling, and are therefore equally heavy. In the condition of gas, matter is deprived of numerous and varying properties with which it appears invested when in the form of a liquid or solid. The gas exhibits only a few grand and simple features. These, again, may all be dependent upon atomic and molecular mobility. Let us imagine one kind of substance only to exist, ponderable matter; and further, that matter is divisible into ultimate atoms, uniform in size and weight. We shall have one substance and a common atom. With the atom at rest the uniformity of matter would be perfect. But the atom possesses always more or less motion, due, it must be assumed, to a primordial impulse. This motion gives rise to volume. The more rapid the movement the greater the space occupied by the atom, somewhat as the orbit of a planet widens with the degree of projectile velocity. Matter is thus made to differ only in being lighter or denser matter. The specific motion of an atom being inalienable, light matter is no longer convertible into heavy matter. In short, matter of different density forms different substances—different inconvertible elements as they have been considered. What has already been said is not meant to apply to the gaseous volumes which we have occasion to measure and practically deal with, but to a lower order of molecules or atoms. The combining atoms hitherto spoken of are not therefore the molecules of which the movement is sensibly affected by heat with gaseous expansion as the result. The gaseous molecule must itself be viewed as composed of a group or system of the preceding inferior atoms, following as a unit laws similar to those which regulate its constituent atoms. We have, indeed, carried one step backward, and applied to the lower order of atoms ideas suggested by the gaseous molecule, as views derived from the solar system are extended to the subordinate system of a planet and its satellites. The advance of science may further require an indefinite repetition of such steps of molecular division. The gaseous molecule is then a reproduction of the inferior atom on a higher scale. The molecule or system is reached which is affected by heat, the diffusive molecule, of which the movement is the subject of observation and measurement. The diffusive molecules are also to be supposed uniform in weight, but to vary in velocity of movement, in correspondence with their constituent atoms. Accordingly, the molecular volumes of different elementary substances have the same relation to each other as the subordinate atomic volumes of the same substances. But further, these more and less mobile or light and heavy forms of matter have a singular relation connected with equality of volume. Equal volumes of two of them can coalesce together, unite their movement, and form a new atomic group, retaining the whole, the half, or some simple proportion of the original movement and consequent volume. This is chemical combination. It is directly an affair of volume, and only indirectly connected with weight. Combining weights are different, because the densities, atomic and molecular, are different. The volume of combination is uniform, but the fluids measured vary in density. This fixed combining measure — the *metron* of simple substances—weighs 1 for hydrogen, 16 for oxygen, and so on with the other "elements." To the preceding statements respecting atomic and molecular mobility, it remains to be added that the hypothesis admits of another expression. As in the theory of light we have the alternative hypotheses of emission and undulation, so in molecular mobility the motion may be assumed to reside either in separate atoms and molecules, or in a fluid medium caused to undulate. A special rate of vibration or pulsation originally imparted to a portion of the fluid medium enlivens that portion of matter with an individual existence, and constitutes it a distinct substance or element. With respect to the different states of gas, liquid and solid, it may be observed that there is no real incompatibility with each other in these physical conditions. They are often found together in the same substance. The liquid and the solid conditions supervene upon the gaseous condition rather than supersede it. Gay-Lussac made the remarkable observation that the vapours emitted by ice and water, both at 0° C., are of exactly equal tension. The passage from the liquid to the solid state is not made apparent in the volatility of water. The liquid and solid conditions do not appear as the extinction or suppression of the gaseous condition, but something superadded to that condition. The three conditions (or constitutions) probably always coexist in every liquid or solid substance, but one predominates over the others. In the general properties of matter we have, indeed, to include still further (1) the remarkable loss of elasticity in vapours under great pressure, which is distinguished by Mr. Faraday as the Caignard-Latour state, after the name of its discoverer, and is now undergoing an investigation by Dr. Andrews, which may be expected to throw much light upon its nature; (2) the colloidal condition or constitution, which intervenes between the liquid and crystalline states, extending into both and affecting probably all kinds of solid and liquid matter in a greater or less degree. The predominance of a certain physical state in a substance appears to be a distinction of a kind with those distinctions recognised in natural history as being produced by unequal development. Liquefaction or solidification may not therefore involve the suppression of either the atomic or the molecular movement, but only the restriction of its range. The hypothesis of atomic movement has been elsewhere assumed, irrespective of the gaseous condition, and is applied by Dr. Williamson to the elucidation of a remarkable class of chemical reactions which have their seat in a mixed liquid. Lastly, molecular or diffusive mobility has an obvious bearing upon the communication of heat to gases by contact with liquid or solid surfaces. The impact of the gaseous molecule, upon a surface possessing a different temperature, appears to be the condition for the transference of heat, or the heat movement, from one to the other. The more rapid the molecular movement of the gas the more frequent the contact with consequent communication of heat. Hence, probably, the great cooling power of hydrogen gas as compared with air or oxygen. The gases named have the same specific heat for equal volumes, but a hot object placed in hydrogen is really touched 3·8 times more frequently than it would be if placed in air, and 4 times more frequently than it would be if placed in an atmosphere of oxygen gas. Dalton had already ascribed this peculiarity of hydrogen to the high "mobility" of that gas. The same molecular property of hydrogen recommends the application of that gas in the air-engine, where the object is to alternately heat and cool a confined volume of gas with rapidity.

MEDICAL NEWS.

University of Edinburgh.—The following is a list of candidates who received Medical Degrees on Saturday, August 1, 1863 :—

Frederick Amy, Jersey; Joseph Edward Barry, England; Alexander Montgomerie Bell, Scotland; Michael Beverley, England; Hugh Boyd, Scotland; Peter Murray Braidwood, East Indies; David James Brakenridge, Scotland; Lewis Cameron, Scotland; Matthew Charteris, Scotland; Frederick William Coates, England; John Craw, Scotland; John Liddle Crombie, Scotland; John Hannah Davidson, Scotland; Archibald Dickson, Scotland; John Rogerson Dickson, Scotland; William James Dickson, Scotland; Andrew David Ducat, Scotland; Dyce Duckworth, England; Francis Metcalf Duncan, Scotland; Andrew Dunlop, Scotland; Charles Walter Elwes, England; Douglas William Eshelby, England; John Ferguson, Scotland; Robert Bannatyne Finlay, Scotland; Jean Baptiste Jérémie Gassin, Mauritius; James Robert Gillespie, Canada; Alexander Goodall, Scotland; George Fox Grosvenor, England; Gordon Hammond, Scotland; Stanley Lewis Haynes, England; William Snowdon Hedley, England; Henry Talbot Higginson, Ireland; William Hugh Jameson, Scotland; William Jeffrey, Scotland; William Jobson, Scotland; Alfred Lewis, England; Edward Lindsay, Canada; Richard Philip Lisle, Wales; Robert Whittington Lowe, Scotland; Alexander M'Donald, Scotland; John Mackie, Scotland; Alexander James Main, Scotland; James Martin, Scotland; John William Maxham, Canada; Henry Frederick Lawaetz Melladew, England; Nigel Gray Mercer, Scotland; John Middleton, Scotland; John Millar, Scotland; Charles Millingen, Constantinople; Paul Moffatt, England; Thomas Cargill Nesham, England; James Macnamara Packer, Barbadoes; John Baptiste Potter, England; John Pringle, Scotland; Walter Reid, Scotland; James Rhind, England; Robert Angus Campbell Richard, East Indies; John Robertson, Scotland; Robert Robertson, Scotland; David Palmer Ross, Penang; James Rutherford, Scotland; William Rutherford, Scotland; Edward Rutherfurd, England; Thomas Sheldon, England; David James Simpson, Scotland; Alexander Ingram Spence, Scotland; John Strachan, Scotland; Benjamin Bingay Thurgar, England; Thomas Thyne, Scotland; Alexander Todd, Ireland; Richard Turner, Wales; Arthur Tuxford, England; Thomas Walker, B.A. (King's College, New Brunswick), New Brunswick; James Watson, Scotland; George Rankine White, New York; James Clark Wilson, Scotland; John Wilson, Scotland; Ninian Alexander Williamson, England; Thomas Arthur Wood, Isle of Man; George Arthur Wellesly Wright, Scotland.

The following candidates received the Degrees of M.B. and C.M. :—

Alexander Davidson, M.A. Edinburgh, Scotland; George Wilson, M.A. Aberdeen, Scotland.

Prizes were awarded to Dr. Peter Murray Braidwood for his thesis "On the Development of Striped Muscular Fibre;" to Dr. Dyce Duckworth for his thesis "On the Anatomy of the Capsulæ Supra-Renales;" to Dr. William Rutherford for his thesis entitled "Researches in Anatomy, Physiology, and Pathology;" and to Dr. Alexander Ingram Spence for his thesis "On the Mode of Actions of Poison."

Army Medical Department.—The following is a list of candidates who were successful at the Competitive Examination in February last, and who have passed through a course at the Army Medical School :—

Names.	*Studied at*	*No. of Marks.*
Chandler, Edward	London.	4935
Creyk, William, M.B.	Aberdeen.	4737
Venning, Edgcombe	London.	4500
Brebner, Alexander, M.D.	Aberdeen.	4458
Nash, William, M.D.	London.	4385
Dudley, W. Edmondson	Dublin.	4233
Doig, Alexander	Glasgow.	4125
Martin, Henry Arthur	London.	3980
Quinton, W. West, M.B.	Dublin.	3959
McNalty, Geo. Wm.	Dublin.	3924
Martin, Wm. Thos.	Dublin.	3821
Davis, Jno. Norman	Galway.	3772
Page, Wm. John	Dublin.	3653
Ferguson, Frederick, M.D.	Dublin.	3628
Segrave, Richard Geo.	Dublin.	3013

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, August 20, 1863 :—

Charles Frederick Long, Ipswich, Suffolk; Frank Charles Plumptre Howes, Belton, Great Yarmouth; Thomas Griffith Evans, Narberth, Pembrokeshire; Thomas Redfern, Chesterfield; Francis Henry Wood, New Romney, Kent; George Henry France, Hightown, near Leeds; Francis King, 38, Southampton-row, W.C.; John Furnell Challen, Alpha-house, Old Kent-road; Richard Carter, Newbury, Berks.

The following gentleman also on the same day passed his First Examination :—

John William Hayward, Guy's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Churchill, Augustus H., M.R.C.S. Eng., has been appointed House-Surgeon to the Wallasey Dispensary, Birkenhead.

Claridge, Charles H., M.R.C.S. Eng., has been appointed Medical Officer of the Fulham Town District of the Fulham Union.

Collins, Thomas, M.R.C.S. Eng., has been elected Governor of the Apothecaries' Hall, Ireland.

Ferguson, George, M.B. Lond., has been appointed Surgeon to the Royal General Dispensary, St. Bartholomew-close.

Handyside, Peter D., M.D. Edin., has been elected Lecturer on Anatomy at Surgeons' Hall, Edinburgh.

Jackson, J. Hughlings, M.D., M.R.C.P. Lond., Assistant-Physician to the Hospital for Epilepsy and Paralysis, late Physician to the Metropolitan Free Hospital, has been appointed Assistant-Physician to The London Hospital.

Mulock, Robert, M.D. St. And., has been elected Deputy-Governor of the Apothecaries' Hall, Ireland.

Walker, Joseph, M.D. St. And., has been elected Dental Surgeon to the Westminster Hospital.

Yellowlees, David, M.D. Edin., has been appointed Medical Superintendent to the Glamorganshire County Lunatic Asylum.

DEATHS.

Bickerdike, James B., M.R.C.S. Eng., at Colliergate, York, on August 9.

Gall, John, L.R.C.S. Edin., at Kinross, Scotland, on August 10.

Jauncey, Walter, L.R.C.S. Edin., at Homend, Cradley, Malvern, on August 8, aged 29.

O'Brien, John, L.R.C.S.I., at Scariff, Co. Clare, Ireland.

Preston, Richard, M.R.C.S. Eng., at Ivy-house, Stand, near Manchester, on August 20, aged 62.

Renehan, Lawrence A., L.R.C.S.I., at the Elms, Finglas, Co. Dublin, on August 11.

Stewart, Alexander, M.D., Inspector-General of Army Hospitals, at Lansdowne-road, Kensington, on August 23, aged 73.

Stuart, Robert, M.D., at 11, Kyd-street, Calcutta, on July 8, aged 53.

Sun-stroke.—The *New York Times* of the 5th inst. gives a list of 47 inquests, held by coroners on the previous day, on persons who had been sun-struck. Most of them were natives of Ireland.

DEATH FROM CHLOROFORM.—The *Progrès de Lyon* newspaper states that a lady, having to undergo the removal of a tumour from the back of the neck, was put under the influence of chloroform. The operation was skilfully performed, but the insensibility of the patient was so prolonged as to cause serious uneasiness. At the end of half an hour a spasmodic action of the limbs seemed to indicate to the bystanders that she was about to become aroused, but this, in fact, was but a convulsion terminating in death.

LECTURE ON THE LARYNGOSCOPE AT NOTTINGHAM.—On Tuesday evening, 25th inst., Dr. Gibb, of London, delivered a lecture upon the laryngoscope before a large meeting of the Profession at Nottingham in the rooms of the Medico-Chirurgical Society, Mr. Ellam, president, in the chair. The lecture was illustrated by a number of physiological and pathological diagrams, together with the various appliances for Medical treatment and diagnosis. On the motion of Dr. Wm. Tindall Robertson, a hearty vote of thanks was unanimously accorded to the lecturer, and it was stated that the last occasion on which a lecture was thus delivered before the Profession at Nottingham, was by the late lamented Dr. Mashall Hall, who gave a description of his excito-motor theory.

LEAF CELLS OF HYMENOPHYLLUM AS SPECIFIC CHARACTERS.—Though some of our best botanists consider the two British plants of *Hymenophyllum* as good species, one of the latest authorities, Mr. Bentham, positively declares that they are mere varieties. Hence any obvious character derived from the intimate structure of these plants becomes valuable and interesting. This Professor Gulliver discovers in the leaf cells, of which drawings and descriptions show that these cells are regularly larger and more elongated in *Hymenophyllum Wilsoni* than in *H. Tunbridgense*. If this remarkable difference prove constant, it will be very easy henceforth to make out either of the species even in the absence of the fruit, while it will be conclusive that the British plants are really distinct, and by no means "nothing but varieties." And the fact will be welcomed by such of our readers as are fond of English ferns and of the elegant amusement of fern culture, since these two British species are well adapted to this purpose, and are really most delicate and beautiful plants, forming a link between the ferns and mosses, and developing their characters admirably under a glass in the drawing-room.—*Ann. Nat. Hist.* for August.

SOCIAL SCIENCE CONGRESS AT EDINBURGH.—The seventh annual meeting of the National Association for the Promotion of Social Science is to be held at Edinburgh. The opening address will be delivered in the Free Church Assembly Hall, on Wednesday evening, October 7, by Lord Brougham, the President of the Society. The business of each of the six following days will be opened by addresses from the Presidents of the different departments in rotation, delivered in the Free Church Assembly Hall, and, after the address, the sectional meetings will be held in the Law Courts and Free Assembly Hall. The concluding general meeting will take place in the Church of Scotland Assembly Hall, on Wednesday, October 14. The council will meet in the library of the writers to the signet, and the Parliament House will be open as a reception room, the College and law libraries and other public buildings and places of exhibition will be open to members during the week. *Conversaziones* will be held in the University, in the Museum and Hall of the Royal College of Surgeons, and in the National Gallery, on the evenings of the 8th, 9th, and 12th. A working men's meeting will be held in the Corn-Exchange on the evening of the 9th, at which Lord Brougham will preside; and on the 13th the Association dinner will take place in the Music-hall. The Royal Scottish Academy intend to hold an exhibition of the works of deceased and living artists of Scotland, collected for the occasion, during the meeting of the Association. The Speculative Society of Edinburgh propose to celebrate the centenary of their foundation by a dinner, to be presided over by Lord Brougham, who was one of its most active members about sixty years ago. The Lord Provost of Edinburgh, the Lord President of the Court of Session, the Lord-Advocate, M.P., Principal Sir David Brewster, and Mr. Black, M.P., have been appointed vice-presidents of the meeting, and among the presidents of departments two local selections have been made, Lord Curriehill, one of the Judges of the Court of Session, having been chosen to preside over the Department of Jurisprudence, and Professor Christison over that of Public Health. The Scotch railways generally have agreed to give return tickets to members and associates, and the leading English lines will afford facilities to visitors through their tourists' tickets. A reception committee, of which Lord Ardmillan is convener, has been engaged for some time in arranging for the reception and accommodation of visitors.

THE HEALTH COMMITTEE, LIVERPOOL.—A TRIBUTE TO DR. CAMERON.—The Chairman (Mr. Bowring) said, before the Committee proceeded with the public business of the day, he would call attention to a matter which was brought before the Council on the previous day by the Mayor—that was, that the appointment of Dr. Trench had received the ratification of the Home Secretary. That fact would sever the connexion between Dr. Cameron and the Committee; and he was sure that every gentleman who knew the constitution and working of the Health Committee would bear him out, when he said that the Committee were deeply grateful to Dr. Cameron for the very cheerful way in which, immediately upon the decease of Dr. Duncan—and he believed even before that event for some time he had assisted the late Medical Officer of Health—(hear, hear)—he had stepped in to fill up the vacuum, and had since that time voluntarily fulfilled the duties of Medical Officer of Health. The great exertion, scientific acquirements, and the sacrifice of time that Dr. Cameron had brought to bear to the discharge of the duties of the office, were such that he (the chairman) was sure he only spoke from his heart the sentiments of the Committee—(hear, hear)—when he said they were all deeply indebted to Dr. Cameron for his assistance; and he therefore moved—"That this Committee desires to record the high sense entertained of the very valuable and efficient services rendered by Dr. Cameron as acting Medical Officer of Health since the death of Dr. Duncan, and beg to render their thanks to him for those services, which he so kindly undertook to perform, under circumstances that must have involved a great sacrifice of time and labour." (Hear, hear.) Mr. Melladew seconded the motion, which was agreed to unanimously. Mr. Lawrence did not think it necessary, after the remarks that had been made by the chairman, to add another word to his eulogium of Dr. Cameron, because anything he could say would not add to the value of the excellent tribute that had been paid to the acting Medical Officer of Health. The chairman had entirely expressed the feelings of the Committee. He entirely concurred in every word that that gentleman had said; and he now, therefore, moved "that a sum of 150 guineas be presented to Dr. Cameron as a slight acknowledgment of the very valuable services he had rendered as acting Medical Officer of Health." Mr. Job had very great pleasure in seconding the motion. He entirely endorsed every remark that had fallen from the chairman and Mr. Lawrence. As chairman of the Lodging-House Sub-Committee—a Committee which was very much dependent upon the Medical Officer of Health for the success of its operations—he could speak from personal experience of the very painstaking and efficient manner in which Dr. Cameron had assisted them. The motion was unanimously agreed to. Dr. Cameron thanked the chairman for the kind manner in which he had been pleased to allude to his services. It was very gratifying to him to think that the manner in which he had discharged the duties of the office had given satisfaction to the Committee; and he hoped the Committee would accept his grateful thanks for the handsome acknowledgment they had made of his services.—From the *Liverpool Daily Post*, July 10, 1863.

THE MOULIN-QUIGNON JAWBONE. — M. de Beaumont has communicated to the Academy of Sciences a few observations in reply to a letter from M. Boucher de Perthes, in which he quotes, it would seem, an opinion expressed by M. de Beaumont about twenty years ago, touching the nature of the ground of Moulin-Quignon, where the famous jawbone was found last spring. M. de Beaumont declares that he still holds that same opinion, viz., that certain gravel deposits, like that of Moulin-Quignon, must be distinguished from the Alpine drift or *diluvium*, properly so called, and the origin of which is owing to causes which have ceased to operate, whereas the deposit of Moulin-Quignon is owing to actual causes,—that is, to those which we still see in operation. That deposit has been attributed either to the action of the Polar ice which may have floated on the bay of Somme, or to various successive changes of level in the general mass of the adjacent land. Whether it be justifiable or not, M. E'lie de Beaumont remarks, to ascribe so small an effect to such gigantic causes, the latter would, after all, still lie within the range of actual causes. And if the gravel bank of Moulin-Quignon is the result of a later mixture of grey and red drift, it certainly does not belong to the grey, which is the real Alpine drift, considered by our author, as well as by Cuvier, as representing the end of the period of fossil elephants, and as anterior to the appearance of man. In support of his opinion that the gravel deposit in question is owing to the most common among the actual causes, viz., storms, frost, snow, etc., M. E'lie de Beaumont observes that the gravel bank of Moulin-Quignon is situated at an altitude of 30 metres above the Somme at Abbeville, and consequently at 39 metres above the level of the sea. It is overlooked at a distance of less than two kilometres by points, the altitudes of which are respectively 61, 65, and 67 metres; at less than three kilometres by another point 80 metres above the level of the sea; and at less than five kilometres by points marking 100 metres. The gradients of the lines going from Moulin-Quignon to those points all exceed the proportion of 1 to 100, or more than tenfold the maximum inclination of the beds of navigable rivers, and greater than those of the Arve, Isère, etc., near their sources, where their waters, even when but slightly swollen, flow with immense rapidity, and will sometimes commit the greatest ravages. Now, to produce similar ravages on the undulated plains of Picardy a single heavy snow storm would be quite sufficient; and who would venture to guess the maximum effect of this kind which may have taken place in the environs of Abbeville since the age of stone. The deposit of Moulin-Quignon may therefore be very well owing to such a cause, though anterior to the turf deposits of the north of France, many of which are posterior to the Roman roads. Such deposits, which M. de Beaumont calls moveable deposits on declivities, are peculiarly abundant in the north of France, owing to the want of coherence of the eocene, miocene, and pliocene deposits which cover the chalk formation, and are essentially contemporaneous with the alluvial beds of valleys—those along the coasts and turf deposits. M. de Beaumont, in conclusion, expresses a wish that the jawbone found at Moulin-Quignon may be analysed and chemically compared with bones taken from Gallo-Roman tombs, and also from the catacombs of Paris.—*Galignani's Messenger.*

DINNER IN DUBLIN TO PROFESSOR SYME OF EDINBURGH.—Several of the leading members of the Profession in the Irish metropolis took the opportunity of Professor Syme's recent visit to Ireland to entertain him at a sumptuous banquet given at the Salt Hill Marine Hotel, near Dublin Dr. Adams, Surgeon in Ordinary to her Majesty in Ireland, presided on the occasion. The usual loyal toasts having been drunk, the president rose and said—I have now the honour of proposing to you as a toast the health of our worthy guest, Mr. Syme, the Professor of Clinical Surgery in the University of Edinburgh. He has paid us the compliment of visiting our Hospitals and museums, and before we had been made aware by any public announcement of the arrival of so eminent a Surgeon amongst us, he had himself the kindness to visit as many of us as time permitted him to do. We soon learned that his sojourn amongst us must be short, and we felt that, as we wished to have an opportunity of enjoying his company even for a few hours, we must without delay extemporise a little Medico-Chirurgical Society, to invite him to give us the pleasure of his company at dinner, an invitation we see he kindly accepted; and now be it understood that this small assembly does not represent any learned body or college, but it is to be looked upon merely as a "society of friends," assembled here on this auspicious occasion to give Professor Syme, as we now do, a hearty welcome, a sincere "cead mile failte." We are all glad to have this opportunity of becoming acquainted with a man whose fame is more than European; we can say it without flattery, his reputation is world-wide. The man who is much occupied in the practice of Surgery, and who has had the advantage of having been early nominated as Surgeon to a large Hospital, incurs an obligation that he should from time to time faithfully communicate to the Profession the results of his experience. How has our guest fulfilled this obligation? He has been, he himself tells us, "for a long period of years engaged in teaching Surgery, with the advantage of a great Hospital as a field of instruction." He has been engaged daily in giving oral lectures to a large class of young students in Edinburgh, and he has published practical works, which students of Surgery of all ages can read in every part of the world. He has worked zealously, and, I trust, in every sense of the word, profitably. His large work in 1841, entitled, "Principles of Surgery," has been in our libraries for many years, and often consulted by us, and in his recent work, "Observations in Clinical Surgery," 1861, he has given graphic accounts of many important Surgical cases and operations, some of which, as it appears to me, not only do credit to himself and to his country, but also to the age we live in. I allude specially to his operations in desperate cases of large axillary and carotid aneurisms, in which, no other resource appearing available, he had boldly recourse to the old operation for aneurism; he ventured to make incisions into the large aneurismal sacs, and dexterously succeeded in securing both ends of the large arterial trunks, rescuing the patients from impending death, and curing the disease. We offer such a Surgeon a hearty welcome to our shores, and we congratulate him on his look of vigorous health, which it may be a satisfaction to his distant friends to know is hereby fully certified by this short-lived Medico-Chirurgical Society of ours. Let me add, while I again repeat the toast, "The Health of Professor Syme," that we hope he may long be enabled to continue his valuable Professional labours, by which he has already advanced, as well as adorned, the science and art of Surgery. Professor Syme, in reply, said:—Mr. Adams and Gentlemen,—I am not a man of many words, or of very ready speech. Although I have lately, during my hurried visit to the south of Ireland, performed a ceremony at Blarney Castle which is said to be strangely effectual in freeing the hinges of the tongue, yet I feel at the present moment no need to draw upon my newly-acquired power. Few occasions of my life have been, I can sincerely say, more gratifying to me than this, and my reception here is a gratification to me I shall feel as long as I live. It is now nearly forty years since I first visited your city,—in the year 1825; being then an anatomical teacher, I came to Dublin to pursue some anatomical researches which I could not follow out at that time in Edinburgh, owing to the absolute deficiency of subjects in our schools. Every facility was afforded to me by my respected friend, the late Mr. Cusack, and I remained for some time working in the school with which he was then connected. I was filled with admiration for the Surgeons of Dublin. I desired to follow the example I had seen. It was my ambition to emulate the Surgical practice and teaching of the Irish school. The kind expressions manifested towards me this evening have convinced me that I have not failed in attaining my object, and that for the advancement of Surgery I have not lived in vain. Fortunately for progress, differences of opinion will exist among Professional men, and though, in some few instances, asperities will accompany them, it is surprising how these may be smoothed away by personal intercourse, and how much good may be done by a kind expression of the eye, or a friendly grasp of the hand on first meeting. May I hope that *some* at least of those present will visit Edinburgh ere long, and thus let us mutually profit by such kindly intercourse. After the lapse of some time Mr. Syme again rose, and having asked permission to propose a toast, gave, in complimentary terms, "The Health of the President," which was briefly responded to. Among the toasts subsequently drunk were,—"The Medical Council," replied to by Drs. Stokes, Apjohn, and Leet, "The University of Edinburgh," "The University of Dublin," etc., etc.

BOOKS RECEIVED.

A Dictionary of Chemistry and the Allied Branches of other Sciences. Founded on that of the late Dr. Ure. By Henry Watts, B.A., F.C.S. Part 6, Chyle—Conglomerate. London: Longman, Green, Longman, Roberts, and Green.

⁂ This valuable dictionary is issued with the greatest punctuality, and appears marvellously full and complete. It is difficult to conceive of any matter appertaining even collaterally to chemistry that is not noticed. Amongst the subjects treated in the present Part are cinchona, citric acid, coffee, cider, champagne, chicory, colchicum, combustion, and a most elaborate essay on classification.

The Sick Room and its Secret. By Mrs. Geldart. London: S. W. Partridge. 1863.

⁂ A well-meaning book, but one which does not show that the authoress knows anything practically of the sick room. The incidents are impossible, the characters unreal, the conversations utterly stilted and got out of books, and such as no mortal Medical man could utter. The authoress little knows what a compound fracture of the leg is, nor yet what half a dozen other things are that she describes so glibly. She introduces a couple of horrid she-ogres in the shape of nurses, but even they are over-done. No nurse crams castor-oil, and soaked biscuit, and gruel down the throat of a newly-born infant at one *coup*. If the authoress wants to preach about fresh air, pure water, and light, she should do so without the dreary machinery of unreal characters spun like cobwebs out of her own brain. All good people are not prigs, and all bad ones are not absolute devils.

On Artificial Dilatation of the Os and Cervix Uteri by Fluid Pressure from Above: a Reply to Drs. Keiller, of Edinburgh, and Arnott and Barnes, of London. By Horatio R. Storer, M.D., of Boston, etc. Reprinted from the Boston *Medical and Surgical Journal*, July 2, 1863. Boston: Clapp. 1863. Pamphlet. Pp. 11.

⁂ A good *resumé* of the history of the measures employed for dilating the os uteri, whether for the relief of disease or for the expulsion of a fœtus. The writer fully but fairly claims what he believes to be his own share of the invention of the use of fluid pressure, whilst he does justice to others. "It will be seen," he says, "that, putting aside the measures of Hüter and Braun for inducing premature labour by dilatation of the vagina as entirely foreign to the subject, it is to Arnott and Gariel that belongs the credit of first suggesting the possibility of dilating the cervix uteri by fluid pressure directly applied to that canal, in those instances from below; that in dilating the uterus by fluid pressure from above, although my instrument was already prepared for the purpose, Keiller really anticipated me by a few days in actual practice; that we both immediately made our discovery known to Medical friends, and thus to the Profession, and that our respective publications in print were made on the same day in Philadelphia and Edinburgh. As regards priority of publication, however, Mr. Murray certainly forestalled us both, his case being the first thus recorded. Personally, I do not hesitate thus far to yield the credit to Dr. Keiller, merely claiming for myself independent conception and suggestion. To Dr. Barnes belongs the merit of forcibly presenting the subject to the Profession at a later date, of endeavouring, by modification of our instruments, to perfect one for practice, and of adopting my proposal of water as the dilating medium." He concludes with a strong remonstrance against the inflation of pessaries with air, on the ground of its ready entrance into the uterine sinuses.

General Directions for the Training of the Probationer Nurses in taking Notes of the Medical and Surgical Cases in Hospitals, issued by Mr. Whitfield, resident Medical officer of St. Thomas's.

⁂ We cannot refrain from expressing a lively hope that this paper may lead to the entire suppression of so useless a body as the Medical staff. Judging from the tone it adopts, and the elaborate Medical information it conveys to these gifted females, the conviction is forced upon us that, having this compendium of science in their hands, the probationer nurses, with the natural improvableness of woman, may easily supersede so antiquated and effete an institution as that of Surgeons and Physicians. Seriously speaking, if women are to know, do, and take note of all that is recommended in this paper, they must be Physicians and Surgeons in reality; and how are they to find time for their truly womanly duties?

Remarks on Ovariotomy; being a Postscript to the Author's Work on Tumours. By George Macilwain, F.R.C.S., etc. London. 1863. Pamphlet.

⁂ "I am certain," says the author, "from my own experience, that by careful and scientific treatment, many tumours in and about the generative organs may be kept for an indefinite period in check, and that, moreover, they are sometimes absorbed altogether." We shall be glad to publish the cases, and think it the author's duty to make known the treatment adopted. He advocates early tapping, on which point also we crave the evidence of cases. "It is difficult to see any reason," he says, "why any abnormal deposition should not be removed by natural processes." We of the *Medical Times and Gazette,* holding most unfeignedly the true and ancient empirical method to be the only safe path in Physic, do most humbly suggest that it is better to deal with the facts at present, and leave off the groping for reasons. We may be sure there are reasons why an ovarian tumour is not absorbed, though we may not be able to see them. Will Mr. Macilwain show us any cases of absorption?

The Diseases of Animals in Relation to Public Health and Prosperity. By John Gamgee. Edinburgh: Maclachlan and Stewart. 1863.

⁂ A reprint of the address alluded to in a separate form. It objects strongly to the slaughter of diseased live stock for human food, showing it to be equally injurious to the stock, to the population feeding on it, and to the pockets of the stock-owners themselves.

Statistical Tables of the Patients under Treatment in the Wards of the London Hospital during 1862. By Morell Mackenzie, M.D. Lond. 1863.

⁂ This is the first annual report of the London Hospital "drawn up in accordance with the form prescribed for the uniform registration of Hospital patients." It is very similar to those lately issued by St. Bartholomew's. We have on several occasions intimated a belief that this form of register, founded on the Registrar-General's classification of diseases, is unnecessarily cumbrous and bulky. Still, if the Hospitals do not object to the expense of so much tabular printing, it undoubtedly answers its purpose, and uniformity in the various publications is a desirable object to attain. The Editor, who is Registrar to the Hospital, appears to have performed his duties conscientiously.

Compendium der Practischen Medicin. Von Dr. C. F. Kunze. Erlangen: Verlag von Ferdinand Enke. 1863.

⁂ The author of this manual states that his object in compiling the work was to offer "to students a leading-string, and to Practitioners a concise useful counsellor." It is a work of exactly 400 pages, giving very succinctly, in separate paragraphs, first, the anatomy, then the diagnosis, and lastly the treatment of diseases. These are considered under the following headings:—Brain, Spine, Nerves, Respiratory Organs, Organs of Circulation, of Digestion, Urinary and Sexual Organs. Poisoning and infection come next, followed by "Disturbances of Nutrition not Dependent on Infection;" and, lastly, "Skin Diseases not of Epidemic Origin."

Pharmaceutical Journal. July and August, 1863. London: John Churchill and Sons.

⁂ The July number of this periodical contains information respecting the proposed new Medical Bill affecting Pharmacy; an announcement of the long-expected British Pharmacopœia; transactions of the Pharmaceutical Society; and some interesting general papers, especially on Quinine from India, and a proposition for a decimal system of Pharmaceutical weights. It is rendered bulky by a list of members, etc., of the Pharmaceutical Society.

The August number presents a considerable amount of valuable matter, and further reports on cinchona grown in India, with details as to their contents in alkaloids.

The Victoria Magazine for August. London: Emily Faithfull.

The Englishwoman's Journal for August. London: Published by the Englishwoman's Journal Company (Limited).

⁂ Two good periodicals, interesting to Medical men and politicians, as advocating successfully the employment of women. Miss Faithfull's enterprise is too well known to require anything but our good wishes.

In the latter publication is a paper on "Ladies in the Orchestra," to which we shall refer elsewhere.

Bulletin de l'Académie Royale de Médecine de Belgique. Nos. 3, 4, 5. 1863. Bruxelles: De Mortier, Fils.

⁂ The first of these three parts contains a paper on Military Ophthalmia; the second, further facts respecting the inhalation of carbon in trades; the third, details as to "perineoraphy" and "perineoplasty." All abound in interesting reports of commissions appointed to inquire into new therapeutical and operative proceedings.

The Edinburgh Veterinary Review for August. Edinburgh: Maclachlan and Stewart.

⁂ Leading articles on the International Veterinary Congress, with Professor Gamgee's opening address, various clinical records, if we may venture so to call them, and similar matter, forms the bulk of this number; but a communication from Mr. Shirley Hibbard upon Instinct is the best adapted for the general reader.

Weiss's Catalogue of Surgical Instruments, etc. 1863.

⁂ This publication is sufficiently explained by its title. It is the best of the class hitherto produced in England, and though perhaps not quite so complete as some French works, bears out Messrs. Weiss's high character as Surgical mechanists.

The Tenth Annual Report on the Sanitary Condition of Cardiff. By Dr. H. J. Paine. Cardiff. 1863.

⁂ We congratulate Dr. Paine, the author of this report, on a sensible and impartial statement. The value of such works when really careful and well done is not merely local, but extends over the whole population by giving publicity to authentic facts and judicious deductions.

The Edinburgh Medical Journal for August. Edinburgh: Oliver and Boyd.

⁂ An interesting paper by Dr. Greenhow on Diphtherial Nerve Affections is followed by Records of Rare Cases and Further Investigations respecting the Calabar Bean. Reviews and Medical News make up a good number.

Journal of the Workhouse Visiting Society. July, 1863. London: Longman and Co.

Half-Yearly Abstract of the Medical Sciences. Vol. 37—January to June, 1863. London: John Churchill and Sons.

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

Morgan v. *Lingen*—Our correspondent, "Verax," will observe that in the article to which he refers we intimated our doubt of there having been any real ground of offence. That doubt is confirmed by his letter. Our expression was "the original *casus belli* if any existed."

Treatment of Hay Fever.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having had under my care recently a case of hay fever, continuing for some weeks, and which baffled my attempts at a cure by means of the ordinary treatment by opium, purgation, etc., as laid down in books, I should be glad if any of your correspondents would favour me with their opinion as to the best method of treatment. I have looked through several recent volumes of the Medical Journals without finding any notice of this peculiar and interesting affection. I am, &c.

Islington, London, N., August. A Puzzled Practitioner.

Illegal Practice.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—At a village in a midland county there has been practising for the last eighteen months a young gentleman without any Medical or Surgical qualification, and who has not even attended his Hospital practice or lectures. He is aided and abetted in his illegal course by a Surgeon of some years' standing in a neighbouring county town, some nine miles distant, who goes over when sent for, and lends his name, in order that the gentleman may recover his debts, and apply for, and hold sick clubs, thus enabling him to evade the Apothecaries' Act, and the 36th clause of the new Medical Act, to the injury of the qualified Practitioners in the neighbourhood, and the common interests of the Profession.

I have the best authority for stating that the gentleman is neither the partner nor the assistant of the town Surgeon, although I cannot suppose for a moment that the latter lends his name for an idea only.

Will you kindly favour me with your opinion through the medium of your pages of the whole proceeding, and also point out some plan by which this flagrant evasion of our Medical enactments can be prevented.

August. I am, &c. Vindex.

[⁂ The whole proceeding, as stated by our correspondent, involves a breach of the law, and not merely of Professional etiquette. The only plan would be to bring an action under the Medical Act, which would oblige both parties to sail under their true colours.—Ed.]

Remedy for a Domestic Nuisance.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your last impression but one of the *Medical Times and Gazette* is a query, asking for a sure remedy for ill-smelling feet, not depending on uncleanliness. I lately had a case of the kind under my care. A young man, in good health, and of cleanly habits, whose feet nevertheless (even with boots on) stunk so abominably that his fellow-workmen could not bear his presence in their room. He was a saddler. After trying different remedies in vain, he at last got rid of the distressing complaint by daily dusting the toes, the inter-digital spaces, and the insides of his socks with the following powder:—Pulv. calcis chlorinatæ, ʒiij.; zinci oxydi, ʒv.

I have not had occasion to try the powder since, and therefore cannot pronounce it a sure remedy; but at any rate it answered well in that one case.
I am, &c. G.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The suggestions which have been offered on this subject appear to me far from satisfactory. One of your correspondents proposes tartaric acid, while another, on principles which must be the very contrary, recommends soda and oak bark. I should not be surprised if the union of the two prescriptions, in the form of an effervescing application, would not be more efficacious. Considering the very general acknowledgment of the powerful action of the alkaline permanganates in all cases in which an effect of thorough purification is required, I am surprised that no one has thought of suggesting their employment in the case in question. Their extraordinary efficacy in instantly destroying bad odours and offensive secretions, coupled with their complete innocuity, render them peculiarly qualified for overcoming such morbid conditions as those on which ill-smelling feet must depend. If any external applications can effect a cure, the alkaline permanganates will do it. The readiest source of those salts is Condy's disinfecting fluid, a few teaspoonfuls of which, added to a foot-bath, to be used several times a-day, will, in all probability, have the effect of modifying the unhealthy condition of the peccant members.
I am, &c. OXYGEN.

THE MORALE OF THE PROFESSION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the excellent pages of a well-known facetious journal, which is always useful in correcting the larger abuses of the Profession, there was recently a sharp and witty reproof given to a man in the shape of a Surgeon, who, as a smart "stroke of business" or trade, was in the habit of receiving a percentage in money from the undertaker on his patients who died and required coffins! It is to be regretted that this miserable traffic has already been worked into a popular story, called "Hard Cash," by Mr. Dickens, or Mr. Reade, as quite common amongst Doctors, and approved by their chief Medical Journals! It is well the Profession should know these things and repudiate them, for of a verity the amount of mischief the tradesmen portion of the Profession are doing at present by quackeries encouraged in high places, joined to the almost rabid violence of good men against ovariotomy, vivisection, etc., is scarcely to be imagined, except by those in active every-day practice.

I wish you would permit me to state the following case, one of many of a like kind, which show the rocks and quicksands on which chloroform in midwifery is constantly going shipwreck, even in the hands of experienced Physicians:—

One morning very early, about four o'clock, last month, I was sent for in a hurry to go to a magnificent house adjoining Belgrave-square, and desired to take chloroform. I there found a delicate poor lady in labour, no Medical man in attendance. I was told by the husband they had their doubts of having me or a dentist over the way, who was clever at chloroform! I was strictly forbidden to make any examination whatever as to the progress of the labour, or to offer the slightest Medical advice of any kind; they had been assured all the Medical men like me were poor tradesmen, who applied instruments to save our trouble, to the utter ruin of the patient's constitution. An ignorant old family female servant, who had had children herself, would do all that was required. I was to give the chloroform (a big bottle of which the poor lady had provided herself with by the advice of some chemist or female friends), and I was to do nothing else. The horror of these people at general Practitioner Doctors in Pimlico and Medical journalists everywhere was something not to be conceived. What was I to do? The corner-stone of chloroform in midwifery being the state of the os uteri, which I could not ascertain, the labour being miserably slow and (as the husband told me) the pelvis being very contracted, as he was told by a former horrid Doctor, the old nurse knowing nothing, there I was, like a ship on its beam ends. The poor people had been reading of the Surgeon and the coffin undertaker. I never felt so degraded in my life. There might have been a funis or an arm presentation for what I knew. I sat by the bedside for twelve weary hours. No entreaty, no aggravation of the pain had the least effect in permitting an examination. If I did not give the chloroform the dentist would be sent for (and what these dentists with diplomas from Lincoln's-inn-fields are in the physiology of anæsthetics it is an agony to think).

Great editors would say, I should have declined any further attendance. Not so; that is merely to perpetuate the miseries of practice they and others have helped to bring about by quack books on chloroform. I gave the chloroform steadily, some ten ounces, and, after a very tedious labour, a very large baby was born. But such was their prejudice (for they had read everything about chloroform and the forceps in midwifery) that they would not permit one moment's attendance further. The mother now cries at the mention of vaccination for the baby, they so detest all the associations of doctoring: to me personally they are most kind, but they seem to take a peculiar pleasure in saying they so despise the narrow-mindedness and vulgarity of the "Faculty" as to chloroform, and its wickedness in going half with the coffin-maker—and this praised in a Medical journal as a good stroke of business—vaccination, too, being managed in this half-and-half manner by some public vaccinators and the neighbouring chemist who gets twice paid, in short, the Profession degenerating into a trade, that they would suffer anything than the sight of a Doctor.

Let us at any rate repudiate this miserable traffic with the coffin-maker, now the talk and scandal of Mr. Dickens's readers, but encouraged by men lost to all sense of Professional decency and delicacy; and if anybody can state anything more incongruous than an uneducated dentist administering chloroform in a case of midwifery such as I have sketched, say with a "hand presentation," and this due to the same journalistic party spirit or dishonesty towards chloroform, if anybody can state anything more lamentable or degrading it must indeed be very lamentable. *Punch* deserves credit for exposing this very "mouldy" business of the coffin-maker. Let us repudiate it also. A paragraph in the *Social Science Review* blames the public press for not noticing the late Bristol meeting. But if our own journals take more care to dwell on such matters as this of traffic in vaccination and coffins or quack chloroform books, and leaves out the "Association," how can we censure the former papers? There are other silly and sectarian people who find fault with the masterly address of Herapath at Bristol, strain at gnats, but can swallow this nasty traffic; they cannot bear any reference to Herapath's history of vinous fermentation, or Sappho or Pindar, because they would bleed in typhus rather than administer wine in it. But we want more of the classics of our art, Sydenham, John Bell, or even Pindar, rather than its poor shop-keeping legends that so degrade us in the eyes of the public, and which it is a duty incumbent on every good man to expose so as to have corrected.
I am, &c.
August 25. C. K.

[*** We publish this letter at the urgent request of the writer. All our readers will agree with us in stating that no Medical man should accept the degrading and dangerous position indicated by the writer. He abdicated the position of Medical adviser, and acted as *cad* to the husband and old women. As for the outcry against Doctors, it is true that there are tradesmen among us, men who would get a percentage on the profit of the undertaker, the druggist, the Surgical instrument maker, the truss and elastic stocking maker, and even of the monthly nurse, or of the attendants who go out to take charge of mad people, but such men are neither numerous nor reputable, nor even notorious enough to fix their dirty mark on our Profession. We assert, on the contrary, that Medical men rank amongst the most self-denying, humane, and considerate members of society, and that, instead of being dreaded and despised, they are universally beloved and welcomed.—ED.]

COMMUNICATIONS have been received from—

DR. RITTER; DR. C. KIDD; DR. T. MCCALL ANDERSON; DIRECTOR GENERAL OF THE ARMY MEDICAL DEPARTMENT; Professor GULLIVER; DR. W. T. GAIRDNER; DR. A. COURTY; APOTHECARIES' HALL; DR. SANKEY; THE UNIVERSITY OF EDINBURGH; MR. J. LANCASHIRE; VERAX; VINDEX; OXYGEN; DR. J. B. MITCHELL; MR. J. Z. LAURENCE; DR. J. CAMERON; MR. CHARLES D. DOIG; A PUZZLED PRACTITIONER; DR. GIBB; MR. W. ALLINGHAM; DR. HORACE DOBELL.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 22, 1863.

BIRTHS.

Births of Boys, 912; Girls, 876; Total, 1788.
Average of 10 corresponding weeks, 1853-62, 1646·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	690	647	1337
Average of the ten years 1853-62	602·5	601·2	1203·7
Average corrected to increased population..	..	..	1216
Deaths of people above 90	2	3	5

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	3	1	5	3	1	6	29
North ..	618,210	10	7	25	2	5	10	38
Central ..	378,058	8	2	15	3	6	11	23
East	571,158	8	..	43	2	6	15	39
South ..	773,175	10	7	37	4	8	19	53
Total.. ..	2,803,989	39	17	125	14	26	61	182

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·758 in.
Mean temperature	58·1°
Highest point of thermometer	76·0
Lowest point of thermometer	40·0
Mean dew-point temperature	49·1
General direction of wind	S.W.
Whole amount of rain in the week	0·29 in.

APPOINTMENTS FOR THE WEEK.

August 29. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

31. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

September 1. *Tuesday*.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

2. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

3. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

4, *Friday*.

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

A CLINICAL LECTURE ON RESECTION OF THE KNEE-JOINT IN CHILDREN,

ILLUSTRATED BY THE PERFORMANCE OF THAT OPERATION.

By THOMAS SMITH, F.R.C.S.,
Assistant-Surgeon to the Hospital for Sick Children.

GENTLEMEN,—In a Clinical Lecture on excision of the knee-joint, it is out of place to enter into a discussion on the claim to priority among those who first put this operation into practice. Let it suffice for us to know that the first operation of this kind was performed by an English provincial Surgeon a century ago. This case, though successful, was not published until years afterwards—indeed, not until after the death of the operator—and thus it furnished no suggestion or data for the guidance of Mr. Park, of Liverpool, the Surgeon who twenty years afterwards in reality established the feasibility of this operation, and suggested its application to other articulations. The operation was subsequently performed in France and Germany in a few instances at the end of the last century. Again, at the commencement of the present, it was performed by Sir P. Crampton, and subsequently by Mr. Syme, but for twenty years the operation was abandoned, until reintroduced by Mr. Fergusson in 1850. Since that time it has been performed, discriminately or indiscriminately, in all between two and three hundred times. I may perhaps mention that at this Hospital, though we are, to use a conventional term, resectionists, the operation has been performed but twice during the whole time that the Hospital has been in existence—once by Mr. Holmes and once by myself—and on both occasions with a very successful result. On another occasion the operation was undertaken by Mr. Holmes, but the condition of the parts being unfavourable for resection, amputation of the thigh was performed. Thus, during twelve years, from a very extensive field of practice, consisting of that class of society most of all liable to joint disease, we have found but three cases where, in our judgment, this operation was justifiable.

Let us for a moment consider what this operation is, "resection," or "excision" of the knee, as it is called, and what is its object. It is the complete removal of the articular surfaces forming the knee-joint, comprising the apposed surfaces of the femur and tibia, and the entire patella; the complete destruction of the cavity of the joint, and the removal of the synovial membrane, provided it is the seat of disease, or a source of irritation.

Its object is to save the patient's limb, to give him a firm and unyielding support for the weight of the body by obtaining bony anchylosis between the cut surfaces of tibia and femur; thus it accomplishes all the amputation can do, *i.e.*, the removal of the local disease; and in addition it aims at providing a natural instead of an artificial support for the body. Any operation purporting to be a resection on the knee which does not fulfil the above conditions cannot fairly be considered as such, nor can the favourable results of the operation be anticipated. For instance, if the articular surface of one bone be removed, and the opposite, from its comparative freedom from disease, be spared, no bony union can take place until the cartilaginous surface of the bone that was spared be separated by ulceration, and its denuded surface be brought in contact with the sawn end of the opposite bone. This process is an exhausting and tedious one to the patient, I need scarcely say, and it is for this reason that the patella should be removed in these cases, as its presence in the wound retards recovery, and in no way betters the condition of the limb when recovery has taken place. Dr. H. Hodges, of Boston, in an essay on excision of joints, has given us some statistical information on this subject. In sixty-one cases of resection of the knee where the patella was not removed, the percentage of deaths was 39 per cent. greater than in the cases where this bone was taken away. The same gentleman, in contrasting a large number of cases of recovery from this operation, where the patella was and was not removed, finds that the non-removal of the patella adds thirty days to the period of convalescence.

So far as my influence extends, I would exert it to persuade you that the operation of resection of the knee is not one of expediency, as it is called, nor one lightly to be undertaken, since it—with the contingency of a secondary amputation which it always involves—exposes the patient's life to as much danger as does primary amputation of the thigh. Neither is the operation suited for acute inflammatory disease of the joint, but I would persuade you to regard the operation as a substitute for amputation in chronic disease of the synovial membrane, cartilages, or articular ends of the bones which, either by its exhausting character endangers the life of the patient, or is in its nature incurable. The disease, if of the bones, should be limited to their articular ends, while visceral disease, advanced age, or a very feeble constitutional condition alike preclude the performance of this operation.

For injuries of the joints the operation has been but occasionally put in practice; indeed, it is seldom that the knee-joint is exposed to accidents sufficiently severe to justify resection that are not at the same time so dangerous to the vitality of the limb or to life itself as to necessitate amputation.

It has been performed for gunshot fractures of the articular ends of the bones, for wounds of the capsule with bruising of the bones, and for compound dislocation; but, with a few exceptions, the general success of these operations has not been remarkable, nor such as to encourage a repetition of the proceeding under similar circumstances, though at the same time the success has been sufficient to justify the operation in exceptional cases.

Resection of the knee is seldom applicable in the case of young children; firstly, because in them diseases of this joint, when in progress, are more amenable to treatment than in adults; secondly, when destruction of the joints has taken place osseous anchylosis is more easily attainable in the actively growing bones of the young than in the completely ossified bones of older people; and thirdly, that any extensive removal of bone from this part of the limb of a child so as to interfere with the cartilaginous line between the epiphysis and shaft of either the tibia or the femur will be very likely to lead to complete arrest of growth in the limb, or so to check its growth as to produce in adult life a serious and irremediable inequality in the length of the lower extremities.

That this arrest of development should take place, and that the subsequent inequality in the length of the lower limbs should be occasionally so startling, is not to be wondered at when we consider that in the immediate neighbourhood of the knee-joints are the two most actively growing epiphyses in the whole body. In one case operated upon by Mr. Pemberton where three and a-quarter inches of bone were removed, six years after the operation the limb was shrunken, blighted, and nine inches shorter than the opposite one. It was a result of this kind in a young patient that led Mr. Syme years ago to abandon the operation altogether, and since then other cases have come to light in which the same accident has occurred. Indeed, our present state of knowledge justifies me in saying decidedly that if, in the operation, the layer of cartilage separating the shafts and articular ends of the bone be intruded on, in all probability the growth of the limb will be seriously interfered with. I would refer any one who is interested in this subject to a most useful paper in the *Medical and Chirurgical Transactions* for 1862, where Mr. Humphrey has collected the histories of many cases which bear upon the effect this operation exercises on the subsequent growth of the limb. On the other hand, as bearing strongly on this point, and in order rightly to estimate the value of this objection, I would remind you that without doubt long-continued disease of the knee-joint in childhood of itself often leads to great inequality in the length of the two lower limbs in adult life.

Perhaps of all diseases of the knee-joint the most intractable is that form of synovitis termed pulpy thickening of the synovial membrane, or white swelling. As you are aware, in the later stages of this affection suppuration generally occurs in the joint, the cartilages ulcerate, the bone becomes eroded, the ligaments give way, and the leg becomes dislocated outwards and backwards upon the femur—the patella slipping over the front of the joint towards the outer condyle of the femur.

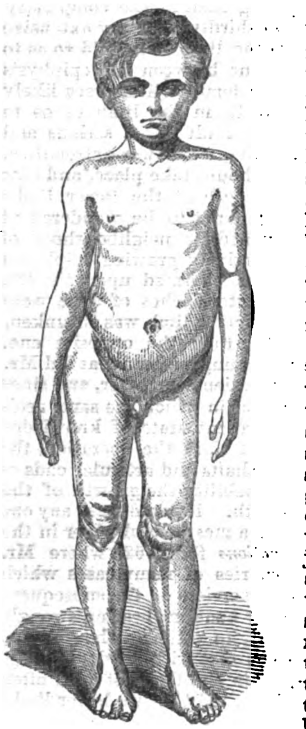
Now, it is to this form of disease in its later stages that resection is particularly applicable as a method of treatment, and for these reasons:—This disease is generally limited to the joint cavity and articular ends of the bones; it rarely of itself leads to bony anchylosis, and the dislocation which is so liable to take place, is, so far as I know, irremediable.

not misunderstand me; extreme flexion of the limb alone can be satisfactorily treated, and the limb can be restored to a right line, but I know of no way nor any apparatus by which the leg can be brought forwards again when once it has slipped behind the articular surface of the femur. It was for a case of this kind that I performed the operation in this Hospital some time ago, under the following circumstances(a):—

For the following account of the boy I am indebted to Mr. E. Calloway, of Canterbury:—

Case 1.—He is now twelve years of age, and in *excellent* health and spirits; he never complains of any pain or uneasiness in his affected limb, and his powers of locomotion are certainly all that could be desired.

On March 10, he with other boys ran races, and won them all; is capital at cricket; can climb any tree better than the boys about him; can stand fairly and firmly upon his leg without any assistance, and every day sits at school five hours with his leg extended, without inconvenience or support. There is no mobility about the joint, and the straightness of the limb while walking without his boot is very slightly noticed, and in running he does not appear to throw the limb out much; he does not require a shoe for the affected limb more than half an inch higher in the heel than the other. The leg about the neighbourhood of the joint has a tendency to look inwards. The cicatrix is firm, sound, and healthy; he has now from a fall two abrasions, one in either end of the cicatrix, which are healing well. The measurements below I took as accurately as possible. From anterior superior spine of ilium to external malleolus—affected limb, 24 inches; non ditto, 26½ inches, From umbilicus to external malleolus—affected limb, 26 inches; non ditto, 27¾ inches. In point of size and nutrition, the legs are both alike good.



From the photograph which accompanies Mr. Calloway's report, you may observe that the shortening of the limb is considerable. Some of it, however, is accounted for by the limb being slightly flexed. It is now nearly four years since the operation was done, and in that time the sound limb has outgrown the other by half an inch. Five months after the operation there was two inches difference between the limb; there is now two inches and a half difference.

In support of the objections to this operation entertained by some is adduced the rarity of its performance among the better classes of society, implying thereby, I suppose, that Hospital Surgeons are willing to perform operations on the poor to which they would not subject the rich. Whether this accusation be true or no, I would submit that the above statement may be made with regard to many operations; take, for instance, amputation of the thigh, for which the operation is a substitute, how rarely is this performed for disease of the knee-joint in the upper classes! In fact, destructive diseases of the joint are far less common in this rank of society; when such affections occur they are treated from their *commencement* with greater care, and if the joint be destroyed, there is in these classes less necessity for the power of independent locomotion, and a greater ability to carry about a useless member than in the labouring poor.

The following is the history of the case I shall have to bring before you to-day for operation:—

Case 2.—May, 1863, Henry C., aged 6, Royston-street, Victoria-park, a pale-looking, spare child, unnaturally intelligent, two years ago fell and struck his knee against the edge of a fender. The following morning the knee was swollen and painful. After a time he was taken to the London Hospital, where he was an in-patient for seven weeks, the knee being kept on a splint. After his discharge from the Hospital he continued as an out-patient, the limb being kept on a splint. During this time the joint still continued painful, but as the splints caused a slough on the upper part of the leg, they were removed, and the limb became flexed. About a year ago abscesses formed about the knee, both in front of the joint and in the popliteal space. About eight abscesses in all have formed. Two months ago he was an out-patient at another London Hospital. When brought here, his knee was flexed, and much enlarged; the leg was dislocated to a moderate extent backwards and outward as regards the femur; it was intensely painful, a large abscess being evidently about to form. He was admitted, and a large abscess was opened just above the inner condyle of the femur, which gave him complete relief from pain; the pain, however, is still very great on any attempt being made to move the joint. A few days after the opening of the abscess, an attempt was made to straighten the limb under chloroform; this could not be effected, as the posterior dislocation was too great. The limb was therefore placed on a splint in a semi-flexed position,—an amount of restraint that the patient, however, could not bear, so that the splint was removed and the joint was allowed to resume its former position. At the present time three or four openings are discharging matter in the neighbourhood of the knee,—one above the inner condyle, one in the popliteal space, a third on the inner side of the head of the tibia, and a fourth on the outer side of the joint.

I have obtained the permission of the parents of this patient to perform amputation of the limb, and this is always desirable before undertaking this operation, since no amount of care in investigation will secure perfect exactitude of diagnosis in respect of the degree of disorganisation which the interior of the joint will present; nor can we always decide on the condition of the articular ends of the bones before their cancellous texture has been exposed with the saw. The incision, therefore, for exposing the joint should be so planned as to be a convenient one for amputation, should the state of the parts require it. I shall therefore expose this joint by a short semilunar flap crossing the front of the knee below the patella.

The patient being brought in under the influence of chloroform, Mr. Smith resected the joint, removing the articular surfaces of the femur and tibia, with the entire patella, and removed with the scissors all diseased synovial membrane. One vessel required a ligature; the cut surfaces of the femur and tibia appeared perfectly healthy. The thigh and leg easily came together into a right line without any division of the ham-strings; the limb being placed in a back splint, and a Liston's splint being adjusted from the axillæ to the heel of the same side, the child was carried off to bed.

The greatest local difficulty in the management of these cases is to counteract the tendency of the bones of the leg to slip back behind the lower end of the femur, the latter bone having a disposition to ride over the tibia. The splint therefore on which this limb has been placed has a pad upon it opposite and beneath the head of the tibia, while over the front and lower part of the femur is a short splint, which you may observe was fixed in position with a buckle and strap to allow of pressure being maintained without disturbing the dressings. One may fairly hope that the limb so put up will not need readjustment for at least a month. In the performance of this operation I would venture to advise you to leave the closing of the wound in the soft parts until after the splint has been applied and the limb finally fixed. This will allow the Surgeon to assure himself of the due apposition of the bones and of the cessation of hæmorrhage, which latter, if it occurs after the patient is put to bed, is troublesome, and hinders the reparatory process considerably.

The parts that have been removed in this operation present just such appearances as one could have wished. Thus, the cartilages are removed by ulceration, the articular surface of the bones are irregularly and pretty deeply eroded, the synovial membrane, where it exists, is thick, juicy, and very vascular; the patella is ulcerated on its under surface to a small extent. The disease is entirely confined to the joint and articular ends of the bones.

These circumstances are all in favour of the eventual result of the case, since the disease has admitted of complete removal without any encroachment upon the growing cartilage, separating the epiphysis from the bone in the tibia and femur.

(a) This case is reported in the *Medical Times and Gazette*, Feb. 7, 1863.

MALIGNANT DISEASES OF THE EYE.

BEING SELECTIONS FROM A COURSE OF LECTURES ON DISEASES OF THE EYE.

By HAYNES WALTON,

Surgeon to the Central London Ophthalmic Hospital, and to St. Mary's Hospital; late Teacher of Anatomy and Demonstrator of the Surgical Operations in St. Mary's Medical School.

Scirrhus of the Eyeball, and Melanosis—Malignant Tumours in Orbit: Medullary, Melanotic, and Epithelial—Recurrent Fibroid Tumour—Malignant Affections of Eyelids.

SCIRRHUS of the eyeball, as a primary affection, is exceedingly rare. Many of our most experienced Surgeons have never seen an example. Only once has Mr. Laurence met with it, and his record of it is the only one of primary scirrhus of the interior of the eyeball that I can find. The tissues of the anterior and inferior third of the right eye were occupied by an irregular growth of firm and very vascular substance, with a granular, warty, and very vascular surface. The posterior segment of the eye, and the lachrymal appendages, were sound. The eyeball was extirpated. There was no local return of the disease, but the man, in middle age, died two years after with medullary cancer in the heart and various other organs. From what is to be gathered out of the very few authentic cases published, the symptoms of hard cancer are well marked. There are the lancinating, burning pains, generally with nocturnal exacerbations. In an advanced stage the tumour is mammillated, dense, as hard as cartilage, and pours out a watery secretion. An error in diagnosis would be most unlikely. Operations have hitherto proved highly unfavourable.

Melanosis of the eyeball is not now considered as a distinct variety of cancer. Modern pathologists assert that deposits of melanic pigment do not occur in the human subject, except in association with some other structure; that no growth contains it so frequently as cancer; that medullary is the variety of cancer with which it is most frequently combined; and that, as it occurs in the eye, it is invariably associated with this growth, which, moreover, is not modified in any respect by its presence. That these opinions are, in the main, correct, I readily admit, but I have seen reason to doubt their universal applicability; and I think it can be shown that, in some respects, the peculiarities of soft cancer do undergo modification, or, what is equally probable, that these melanotic growths are more frequently of a non-malignant nature than is commonly supposed.

Melanosis differs from medullary cancer in not occurring in childhood. I have never seen it earlier than the twenty-second year of age; in other respects it does not differ materially in its progress. At the commencement, extinction of vision is the only subjective symptom; the shining reflection from the fundus of the eye is wanting, and there is seldom any way of distinguishing it from amaurosis, though, in exceptional cases, a dusky, slate-coloured tumour may be seen deep in the eye; as the disease advances, however, the symptoms of distension become evident, the eyeball is gradually enlarged, the lens become opaque, and, with the iris, is thrust forward against the cornea; the sclerotica assumes a dusky hue, is traversed by numerous large tortuous vessels, and is elevated into dark-coloured prominences, which eventually give way, and permit the escape of the dark-coloured tumour. This increases in size; there is occasional bleeding and sloughing, and copious discharge of thin, inky fluid; death takes place either from the exhaustion produced by the local disease, or from the formation of secondary deposits of a similar nature in various parts of the body. When the eye is examined after death, or after extirpation, the tumour is found to be soft in consistence, and of deep sooty black colour, streaked here and there with various shades of brown or grey. I suspect that the growth is first developed in the choroid.

Melanosis is apt to be confounded in diagnosis with sub-choroid dropsy. It is to be distinguished by pressing forwards the opaque lens and the iris against the cornea, which is mostly a little hazy, and although the pupil is generally dilated, it is scarcely ever irregular. In the choroid disease the iris is not pressed forwards, but it is dragged in the direction of the tumour of the sclerotica, so as frequently to be invisible on that side of the eye.

Melanotic growths occasionally take their origin from the outside of the eyeball. Whatever be the true nature of melanosis, it differs materially from uncomplicated cancer, in the result of operations for its removal. There seems to be less malignancy in it, and its extirpation by operation is unquestionably less liable to be followed by reappearance of the disease than that of medullary cancer. Judging from my own practice, and from what I have seen, I believe that life is much prolonged, and that much suffering is averted by operating. Patients have been seen five and seven years after the operation, and in good health; although, from all the facts that I can gather, the disease will ultimately kill. The greatest benefit is to be expected by an early operation, and such treatment should be limited to cases in which protrusion and ulceration of the melanotic growth has not taken place, for when it has gone so far, or when the internal organ is affected, surgical interference will, I strongly suspect, facilitate the fatal termination.

Malignant tumours, originating deeply in the orbit, exhibit no peculiarity in the physical changes which they produce in the orbit, orbital appendages, or eye, by which they can be at first distinguished from simple tumours in the same situation. In some instances the rate of progress, or other peculiarities of any given case may, however, produce the suspicion of malignancy at an early period, and when the tumour has approached the surface, or when the constitutional efforts of the disease have become developed, the diagnosis is easy.

Medullary growth and melanosis occasionally have a primary seat in the orbital tissues, forming tumours which protrude, or displace the eye in various ways, according to their situation and the direction of their growth, and one or other of these forms of cancer almost invariably spring up in this situation, after extirpation of an eye affected with medullary cancer. Cases are recorded by Mr. Lawrence, Dr. Mackenzie, and others, in which these diseases appear to have been consecutive to local violence, and there is no doubt that injury occasionally produces them, though in perhaps the majority of cases no directly exciting cause can be assigned. The seat of the deposit may be either the cellular or the adipose tissue; in some instances growths of considerable size have been found to spring from the optic nerve while the eye was still sound. It is important to recollect that when these growths attain a large size, their pressure is very liable to cause absorption of the bony walls of the orbit. With a single exception, all the cases of encephaloid that I have met with have made their external appearance at the inner side of the orbit. The eyeball has been more or less pushed aside, and sometimes thrust forwards. The characteristic of malignancy has been chiefly manifested in the immobility of the tumour. Indeed, this fixedness is more to be relied on for the nature of the disease, when the growth admits of examination, than any other symptom. If it be disregarded, the absence of pain, and the apparent health of a patient, are apt to lead to a wrong diagnosis. It holds good, whether the cancer be dense to the touch or of less firmness. Only when there is a degree of softness that causes a feeling of what is called fluctuation, may the intimate attachment be more or less marked, or not easily made out, and the nature of the affection rendered very obscure.

Epithelial cancer occasionally appears in the orbit as a subcutaneous or subconjunctival tumour, which acquires considerable bulk before it ulcerates or shows any indication of malignancy. The chief points to rely on are the fixed character of the tumour, the immobility,—it seems, as it were, to spring out of the bone, being without any definite base,—rapidity of growth, and irregular outline of form.

The recurrent fibroid disease is rare; several cases are on record of return of tumours removed from the orbit, which, at the time of extirpation, were regarded as fibrous; but I have not met with any account distinctly indicating that the tumours had the character of recurrent fibroid, except in a single instance supplied to me by Mr. Cock, of Guy's. It occurred in a boy ten years old, growing on the upper part of the orbit. It was readily turned out of its bed like an ordinary fatty tumour. The character of it, as determined by the microscope, was fibro-plastic. The wound healed readily. In a year the orbit was filled with a new growth, and now the eyeball was immensely thrust out and disorganised. The increase was very rapid after the reappearance. The entire contents of the orbit were removed. The tumour was of the same structure as the first, but larger and more adherent to neighbouring parts. A good recovery ensued, but the ultimate issue was not known.

In the earlier years of my practice I was induced, from the want of more knowledge, to operate for these orbital tumours, but the certain return of them, and, in the medullary cases, the impossibility of getting away the whole of the morbid growth, either because of adhesion to the periosteum, or because a part of it passed out of reach through some of the orbital apertures, have induced me to abandon any such interferences. I have often been struck with the enormous quantity that I have removed, so tightly has the cancer been packed, when but a small growth was suspected.

Frequently do patients beseech me, with the most intensely pressing entreaties, to operate, under the false impression of the possibility of a cure, and sometimes, too, in the absence as yet of any suffering. It is most distressing to be obliged to refuse. What shall I say with respect to those melancholy cases in which excessive and incessant pain induces the sufferer to urge the removal of his disease at any hazard? For such it is impossible to lay down any general rule; each must be investigated on its own merits, and the Surgeon must form his own judgment on the expedience of operating. For my own part, if after having fully explained all the circumstances, the patient should still persist in his request, I should feel disposed to comply with his wish, if it were possible that by so doing I could relieve him. Severe and protracted agony may of itself, from the exhausting nature of its influence, prove the immediate cause of death. In such cases we might be justified in performing an operation which, under other circumstances, would be altogether inadmissible. The result of even partial removal of the disease might not only cause great relief from present suffering, but in all probability prolong life.

Malignant affections of the eyelids are next to be considered. Medullary cancer and melanosis occasionally, though rarely, have their primary seat in the eyelids. In this situation they present no peculiarities which merit separate consideration.

Scirrhus and epithelial cancer are the varieties of malignant disease to which these parts are especially liable; the under eyelid is the one usually attacked. Occurring here, they present, in many respects, a close resemblance to each other, —so close, indeed, that it is to their history and mode of progress, rather than to their external appearance, that we must look for marks by which to distinguish the one from the other.

In scirrhus, the attention of the patients is generally first attracted by a feeling of stiffness in the lid, and undefined thickening and hardening of the subcutaneous cellular tissue. In some instances, severe lancinating pain is an early and prominent symptom; in others, there is merely a sense of uneasiness or itching, which induces the patient to rub or scratch the part, and this, by breaking the skin, leads to the commencement of ulceration. This process, having once begun, follows the same destructive course as in other parts of the body, and produces the most frightful deformity. The bones, as well as the soft parts, are destroyed by ulceration, and the nose, mouth, and orbit have been seen to be thrown into one large cavity. As is the case with fibrous structures generally, the sclerotica long resists the attacks of the disease, and, though all the other contents of the orbit should be destroyed, the eyeball may be seen lying in the cavity almost as completely detached as if it had been dissected. At last it is removed. In other cases the irritation to which it is exposed leads to inflammation and sloughing of the cornea, the humours escape, and collapse ensues. Death takes place from the contamination of the system and the formation of secondary deposits, or from the exhausting influence of pain and constitutional irritation.

Epithelial cancer commences by the formation of small, white elevations or tubercles, generally towards the inner canthus; they are hard to the touch, and appear to be situated in the texture of the skin. They slowly enlarge and increase in number. In process of time these tubercles coalesce into a mass; itching or uneasiness is felt; the surface is irritated or scratched; and ulceration commences; this proceeds gradually, but irregularly; at one part of its circumference it may be extending, while at another cicatrization may be going on. Ultimately the destruction of the face which takes place is equal to that which is seen in scirrhus, the soft parts of the orbit and cheeks being destroyed, and the cavities of the mouth, nose, and orbit thrown into one, by the ulceration of their bony parietes. One of the most striking peculiarities of this form of cancer is the remarkable slowness with which it progresses. If the general health of the patient be unimpaired, and the local affection shielded from irritation, six or seven years may elapse before ulceration supervenes. Its progress after the commencement of ulceration may be equally slow; ten, fifteen or even twenty years may elapse without any advance having been made; in other instances, however, and especially when by any means the general health of the patient is depressed or the sore is injudiciously treated by irritating applications, the disease may advance with the most destructive rapidity. Another striking peculiarity is the tendency to partial reparation in one part of the sore while ulceration is in active progress in others; smooth shining cicatrices, of a pale bluish colour, are formed, but are seldom of long duration; they are again involved in ulceration, while the same process is repeated in another part. Pain is not a prominent symptom of epithelial cancer; in some cases, even where the disease has committed the most extensive ravages, it may be almost entirely absent. At other times it is acute, but this seems to be owing rather to incidental complications—such as the exposure of the nerves by ulceration —than to be an essential feature of the disease. Ultimately the cancerous cachexia is induced, and the patient dies most frequently from exhausting irritation.

From this description it will be seen that the distinction therefore between these is to be drawn rather from their history than their appearance. In the early stage, when alone the diagnosis is of any practical importance, it will be found that in scirrhus the skin is movable over the indurated mass, whereas the epithelial growth appears to be deposited in its texture. The tubercles of scirrhus are less prominent, more speedily become adherent to the subjacent textures, are of a more decided colour, and are more frequently attended with pain than those which usher no epithelial cancer. The progress of the former, too, is in general more rapid; the constitutional cachexia is more speedily and decidedly developed, and the lymphatic glands are in general implicated—a complication which is rarely seen in epithelial cancer.

The same unfavourable results have been found to follow the excision of scirrhous growths and ulcerations from the eyelids as from other parts of the body. In such cases therefore reliance should be placed rather upon judicious and well-sustained general treatment than upon operative interference.

In epithelial cancer, however, the circumstances are different, and there is more encouragement to hope for success. Here it is that the true cancer growth seems at its minimum. But the operation should be limited to instances in which there is no suspicion of secondary deposit, and in which every particle of diseased structure can be removed; and in some instances there will be a cure, in some prolonged life, and relief from present suffering.

Too much care, however, cannot be taken in forming a correct diagnosis—a matter in many cases of extreme difficulty. A considerable number even of a non-malignant nature, occasionally assume an appearance which it is impossible to discriminate by their naked eye characteristics from genuine cancer. It may be a wise precaution therefore not to operate without previously submitting our patient to treatment, which will in some instances clear up the real nature of the case, and will in all, perhaps, increase the chances of a successful result.

It will frequently happen that the disease is of such an extent that to be removed it is necessary to sacrifice the whole eyelid in order to effect its complete extirpation. In such cases the eye will almost inevitably be lost from the irritation produced by exposure, and the contact of dust and other extraneous matters. It will therefore be well, in every instance in which it is practicable, to conclude the operation by the formation of a new lid, which must be taken from any of the healthy skin in the neighbourhood that may be available. This proceeding, the filling up the wound by a piece of healthy skin, was at one time thought to exert a powerful influence in preventing the reproduction of the disease; more extended experience, however, has shown that this opinion is erroneous.

In my observations I have made no mention of the use of escharotics, which are strongly advocated by some for the removal of superficial cancerous sores, and I have avoided speaking of them, because I believe that the instances are rare indeed in which the knife is not to be preferred as at once more rapid and effectual and much less painful. Escharotics undoubtedly sometimes effect the removal of the disease, but they frequently require to be several times repeated; their use is attended with intense pain, and, in the event of their not succeeding, the irritation which they produce cannot fail to be followed by the most injurious effects.

ORIGINAL COMMUNICATIONS.

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CLINICAL MIDWIFERY.

By FRANCIS H. RAMSBOTHAM, M.D.
Physician-Accoucheur to the London Hospital, etc.

(Continued from page 164.)

I HAVE passed over sixteen cases of adherent or retained placenta which I met with during these five years, because their similarity one to another would make their recital tedious. The following six cases of dangerous flooding after delivery, three of which occurred from uncommon causes, came under my notice between January 1, 1840, and December 31, 1844:—

Flooding after Delivery, from a Tumour imbedded in the Substance of the Uterus.

Case 238.—On January 2, 1840, at 2·15 a.m., I was sent for to Mrs. A., Finsbury, whom I was engaged to attend in her fourth labour. I found the os uteri almost entirely dilated, the face presenting towards the left sacro-iliac symphysis. I immediately ruptured the membranes, and the child was born in twenty minutes. The uterus contracted strongly, but it remained high and large, and the placenta did not descend. As a copious gush of blood took place in fifteen minutes after the child's birth, I introduced my hand into the uterus for the purpose of removing the placenta, which was very large, and extensively adherent, and strewn all over the maternal surface with small granules and speculæ of bone. While in the act of separating it, I was sensible of the presence of a large fibroid tumour, which was imbedded in the posterior part of the body of the uterus. On the removal of my hand with the placenta, the organ contracted, but it relaxed again, and it continued contracting and relaxing alternately for two hours. For the first half-hour she flooded violently, but under pressure, the application of cold, and the introduction of the hand a second time, the hæmorrhage abated, and at last ceased. I again felt the tumour distinctly when my hand was in the cavity the second time. On squeezing the organ externally by the hand, some small irregularities could be easily felt, which no doubt were lesser tumours of the same kind. I did not think it safe to leave her for three hours, for it seemed to me that the presence of the tumour prevented the perfect closure of the uterine cavity, as it projected so far inwards. I attended this lady with her previous child in July, 1838, and she then flooded considerably after the placenta had passed, but, as I did not then introduce my hand, I was not aware there was any organic change. She left my neighbourhood, and I lost sight of her.

Flooding after Delivery, complicated with Polypus Uteri.

Case 239.—On the afternoon of Saturday, August 12, 1843, I was sent for to a lady whom I had attended of three or four children in London, but who had removed to a distance of seven miles, and who had been subject for more than three years to irregular uterine hæmorrhages, sometimes to a great extent. She was nearly six months advanced in pregnancy, and had suffered from these bleedings during the whole of that time, as much, indeed, as she had done before impregnation. She had sustained a very profuse loss a fortnight before, and another on the evening preceding my visit. I found her much exsanguined by these attacks and greatly depressed. As hæmorrhage was then going on from the uterus, as she was suffering distressing uterine pains every five or six minutes, as the os uteri was dilated to the size of a shilling, and as I could distinctly feel the head presenting, I ruptured the membranes, and gave exit to a large quantity of liquor amnii, turbid, and of a green colour. The discharge almost immediately ceased, as did also the pains. The uterus resumed its action late on the evening of the next day, and the child was expelled at 12, night, under the superintendence of the family Surgeon; it breathed a few times, and then expired. There had been no return of hæmorrhage, nor was there any until after the birth of the child, when a fetid coagulum, that would weigh from two to three pounds, escaped, together with some fluid blood. I was summoned, and arrived at 4 a.m. of the 14th. She was a good deal exhausted, though there had not been much fresh loss. I found the placenta in utero, partly separated, but the greatest portion attached to a polypus as large as a man's doubled fist, that grew from the fundus uteri by a stem as thick as three fingers. I removed the placenta. There was still no hæmorrhage. The lady rallied considerably, and I left her at 9 with a well-grounded hope that she would survive, as she had no return of faintness while I remained with her. Soon after my departure, however, there being no additional hæmorrhage to account for it, she began to flag, complained of a painful sensation of constriction in the region of the diaphragm, and died quietly at 12, noon.

N.B.—In most, if not all the cases which I have seen, where pregnancy and an intra-uterine polypus existed together, although there might have been irregular bleedings before conception occurred, the hæmorrhage has been either entirely suspended or greatly lessened during the residence of the ovum in utero. But in this case that did not take place; the loss of blood, indeed, was rather increased after impregnation. Whether this was owing to the placenta being largely attached to the polypus itself I cannot determine, but I think it probable. This attachment of the placenta is a curious feature in the case. We should not *à priori* have supposed that there was any arrangement of vessels in such a tumour as could be rendered subservient to the preservation and nourishment of the growing embryon. But in cases of extra-uterine fœtation we have nourishment afforded by structures even less likely to afford it than an uterine polypus. The fibrous polypus, indeed, like the common fibrous tumour of the uterus, seems in its intimate structure to resemble the uterine parietes very closely, as is proved by a case of labour complicated with polypus attended by Mr. Crisp, also another by Dr. McLea, in vol. 19 of the *Medico-Chirurgical Transactions*, and by the fibroid tumour in Dr. Waller's case, where the Cæsarean section was performed, as recorded in the *Medical Times and Gazette*, vol. 1 for 1853, p. 266. In that case, under the microscope, the structure of the tumour could not be distinguished from that of the uterus.

Flooding after Delivery, with Relaxed Uterus.

Case 240.—On June 27, 1842, at 4·30 a.m., I was sent for by a Medical friend to Mrs. O., close to Whitechapel Church, who had been delivered of her seventh child more than two hours. The placenta came away naturally, but the uterus relaxed immediately after, and she began to lose blood copiously. It continued relaxing and contracting alternately, the cavity filling when relaxation took place, and the contained blood being expelled by the contractions till she became faint, when the people about her were alarmed, and I was sent for. I found her very pallid and very faint, and the uterus much larger than it should have been. Compression and ice had been tried uninterruptedly for an hour and a-half, and still the flooding went on. I therefore at once introduced my hand into the uterine cavity, and removed full a pint of coagulum; the uterus then contracted permanently, and never again relaxed its fibres; nevertheless, I kept my hand externally on the organ for two hours, lest we should have a recurrence of the dangerous symptoms. She had recovered from the faintness long before I left her, and ultimately made a good recovery.

N.B.—This is one of the common type of cases of flooding after the delivery of the placenta, where contractions and relaxations alternate with each other, there being little or no after-pains. The next two cases are, though by no means very uncommon, of much less frequent occurrence.

(To be continued.)

ON SOME EFFECTS OF CANNABIS INDICA.

By HORACE DOBELL, M.D.,
Physician to the Royal Infirmary for Diseases of the Chest.

SEEING, in last week's Number of the *Medical Times and Gazette*, an experiment with cannabis indica reported by Dr. W. W. Campbell, I was led to refer to some notes of a case which I recollected having made some time ago. I found that they contained the following account of a train of peculiar symptoms which followed a dose of cannabis indica:—

In December, 1860, N. S., aged 31, the wife of a policeman, came under my care at the Royal Infirmary, suffering from spasmodic asthma. The paroxysms were of the greatest severity. The usual interval between the attacks was from two to three weeks, the longest interval for two years was six weeks, and that occurred only once. She had taken all the usual remedies without any marked benefit; and, as she was a simple, straightforward, intelligent woman, well educated for her station, whose statements therefore might be relied on, I thought it a good case upon which to try the cannabis indica, with which I was then treating several other cases of spasmodic asthma. The tincture was given three times a day, in doses gradually increased from five minims to twenty, without any perceptible effect; but on being increased to thirty minims it had a marked influence over the paroxysms, without producing any unpleasant symptoms. It was continued in this dose until several of the usual periods had passed over without an attack of asthma. It was then discontinued, but, another paroxysm occurring, the medicine was renewed. After it had been again taken for a short time, the stock of tincture at the Infirmary became exhausted, and a fresh supply was procured, from which the patient received her usual weekly allowance. Having taken one dose out of her mixture, containing thirty minims of tincture as before, she became very ill, but not feeling sure that the medicine was the cause, and fearing a return of asthma, she repeated the dose as soon as she got better. The same symptoms set in as after the first dose, and she herself wrote the following account of them, and brought it to me on her next visit:—

"After taking the medicine the head became giddy, then came a drawing pain at the chest and then at the heart. Then came pinching pains in the flesh of the body, and bearing down pains in the loins, and the bowels and bladder acted with force. Then the tongue became swollen and drawn to the roof of the mouth, the flesh felt puffed all over, and tingled. Then retching came on. Then a continued yawning with a shiver. Then I felt as though I wanted to be held tight, like hysterics, and the power of speech seemed lost, and all sounds heard seemed to be at a distance. So it continued five or six hours, the head being very bad all the time, with noises in the ears; and when the head was laid down it felt heavy, with a hot swimming coming over it repeatedly. Then I fell into a deep sleep—unnaturally deep—which lasted all night, after which, having taken a little coffee, the same symptoms continued more or less during the day, till they gradually went off."

After receiving this report from the patient, I diminished the dose to eight minims, but it produced the same train of symptoms, though in a much milder degree, and the drug was obliged to be discontinued, as the patient was afraid to take it.

SOME OBSERVATIONS ON THE DEFORMITIES CONSEQUENT ON BURNS, AND ON THE PECULIAR NATURE OF THE CICATRICES.

By J. H. JAMES, Esq., F.R.C.S.,
Consulting-Surgeon to the Devon and Exeter Hospital, etc.

THE treatment of cicatrices after burns, especially in the neck, has lately engaged much attention, and has quite recently been the subject of a paper read to the Medico-Chirurgical Society (a), and discussed by some of its eminent members.

It may be permitted to me, as having taken a very early interest in these cases, to offer a few observations, which the frequent recurrence of the subject of late years may justify, especially as my own experience is, I believe, the longest that has been recorded as regards the neck. A brief history of the Surgery connected with these distressing cases may not be amiss. I will recall attention to the fact that we owe to my late lamented friend Mr. Henry Earle the first endeavour in modern times to relieve this great and disabling deformity where the limbs were (b) concerned, and his mode of treatment, with some variations, has been since, and most usefully employed. Mr. Earle, however, as well as the other leading authorities of that day, among whom I may mention Sir Astley Cooper (c) and Sir Benjamin Brodie, declared that these deformities in the neck baffled any attempts, and that in this situation the operation was useless, and consequently cruel. No one advocated it. No one performed it.

On considering the cause of this failure, I was led to believe that it essentially depended upon the difference in the bony structures concerned; for while in the extremities we have only to deal with simple hinges, in the neck the variously complicated and flexible joints of the vertebræ, (if left to the free play of the muscles acting upon them and the head,) will elude any ordinary attempts at obtaining and maintaining a right position. This flexibility allows of extreme distortion to take place, especially in the early periods of life, and afterwards opposes a powerful obstacle to the methods of cure successful in other cases. The nature of the cicatrix when formed anywhere is well known. Its effects are also well known. In the limbs it will draw the fore-arm or leg into close and immovable contact with the arm or thigh. In the neck it will draw the chin almost close to the sternum. By taking off the counterpoise of the lower lip it will cause the tongue to protrude the alveolar processes and teeth horizontally, and, if lateral, will even draw down the superior maxillary bone and the orbit on that side. In the limbs, a simple splint will suffice for the treatment after operation, as we have only hinges to deal with. In the neck more is required, and it led me to try a plan which would effectually maintain a separation of the base of the cranium from the thorax, and, by the gradual operation of a screw, place them at their normal distance. The screw collar I adopted was described in the thirteenth volume of the Medico-Chirurgical *Transactions*, (d) and my first three cases given. I then believed the invention, such as it was, my own; in this I erred. Gooch has given, as Mr. Hussey has stated, a somewhat similar collar, but, if it was ever applied to these cases, at the time I mention it was wholly disused and ignored.

In cases of no long duration and no extreme severity, the simple division of the cicatrix, and the maintenance of the parts in a separate condition while the gap is healed by granulation and the divided cicatrix prevented from approximating by laying the head over a cushion of any sort, will sometimes succeed, but the well-known law of the economy, which provides for the ultimate re-union of divided parts (if the operations of Nature are not controlled), here, as elsewhere, has been the general obstacle to success. The method I employed may be very briefly described. The dense cicatrix was completely freed from its connexion in the neck by dissecting it from the subjacent free cellular tissue, and then placed under the chin and secured there—and to this extent it was a plastic operation. The large exposed surface treated at first by the mildest means, and after a short time the collar applied and extension gradually made. That this mode, though long and tedious, is completely successful if well carried out, that the new cicatrix fulfils its purpose, and that the parts, when so restored maintain their proper condition, it is my purpose now to show.

Professor Mutter proposed an improvement by supplying the loss of integument by a flap obtained from below. This plan has been followed with success in some cases, and in one adapted to it I found it answer well; but there are many in which the cicatrix extends to the whole neck and upper part of the thorax and where normal skin cannot be borrowed, in such, Nature must be called upon to make new skin, and thoroughly useful new skin may be formed. Two extreme cases occurred to me (one at a very early period), and I may refer to them in proof that complete restoration can be obtained by the means described; and still more, that it is *maintained* during subsequent growth and in mature age.

Elizabeth B., one of the cases described in my paper, and then a girl, I saw about three years ago, a fine-grown woman, with scarcely a sign of deformity or scar. Another, and about the worst case I ever saw, sent to me from Fowey, in Cornwall, by my friend and now colleague, Mr. Kempe, in the year 1842, is alive, and the cure, which was perfect, is fully maintained as I learn from him. This case I more particularly mention, because I had casts taken, which are now, with several others, in our museum, and I may mention that in the year 1843 I took those casts to Leeds and showed them at the meeting of the Provincial Association. On my return through London, I also showed them to my friend the present worthy President of the Royal Medical and Chirurgical Society, and he was so struck with them that he desired me to leave them for the purpose of copies being taken for the museum of King's College, and it is not improbable that these copies are there now. They prove the complete success of the plan in restoring the most complete deformity, and, what has been contested, the permanence of the cure.(e) I shall only mention further that the operation continues to be practised at this Hospital with the aid of the collar I have described, and very lately by Mr. Kempe, with every prospect of complete success.

(a) "Case of Extreme Deformity of Neck and Arm," read May 23, 1863, by J. Wood, Esq., Assistant-Surgeon to King's College Hospital.

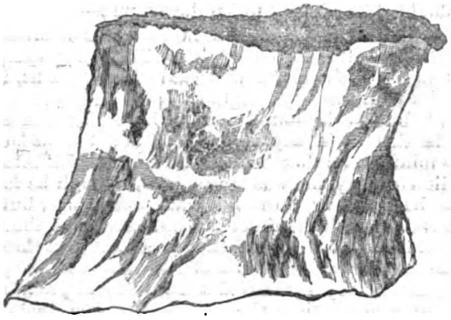
(b) Sixth and Seventh Vols. of Medico-Chirurgical *Transactions*.

(c) Emphatically by Sir A. Cooper. Lectures on Surgery by Tyrrell. Vol. I., p. 175.

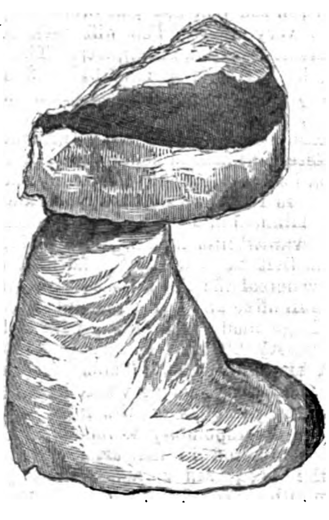
(d) January 11, 1825.

Drawings of Casts of Ann Tinman, aged 24, *when operated on, July* 2, 1842, *and Discharged February* 9, 1843.

No. 568.



No. 569.



This slight sketch of my connection with this operation may perhaps be justifiable at the present time, but I have another object in view, which is to solicit the attention of the Profession to the peculiar constitution of these cicatrices from burns, so different from most others. We do sometimes see cicatrices of similar structure arising from other causes about the fingers and hands, or in stumps, but as regards the sores resulting from burns, whether in the limbs or in the neck, if they are left to themselves, vicious cicatrices are the common, almost the universal result. Now, let us compare them with others produced by apparently similar causes, I mean where the skin has been destroyed by potassa fusa. In the former, the great difficulty is to get them to heal, in the latter to prevent them from healing, even by the introduction of peas, or other foreign bodies. In the former the cicatrices are extremely dense, inelastic, unyielding, having almost the qualities of tendon; in the latter they are soft, ductile, hardly distinguishable from ordinary skin. What is the essential cause of this difference? Again, from the very same spot whence these vicious cicatrices have been dissected the subjacent cellular membrane shall throw up granulations which will form the useful healthy skin I have described in the cure by operation. Why should it not have been equally formed in the same region in the first instance? Again, another question arises. Is it a matter of necessity that the sores from burns should form these vicious cicatrices? and if it can be prevented, how? The answer to this is that it often can be prevented, and that by very careful management consisting chiefly in the exclusion of the influence of air as far as may be, in opposing the tendency to contract, and in the employment of nitrate of silver, either in substance or solution. It is not, however, my object to go into details; I can only say that by such methods I have seen very extensive burns yield perfect cicatrices.

There is one other point on which I wish to make a brief observation. Many pathologists insist upon new skin being the product of other skin; also it is an opinion not uncommonly entertained that cicatrization only proceeds from the edges. Now, it is no unusual thing for the scrotum to be entirely destroyed by urinous infiltrations; the tunicæ vaginales are laid bare, granulations form on their surface, and a new scrotum is obtained. Every Surgeon of much experience must have seen this. Many years since a boy was brought to the Hospital with the skin of his foot entirely destroyed by molten iron. I had scarcely a hope of its being covered in with useful skin, but it was, and this was generated from the subjacent tissues. So much for the matrix of skin. The next point is whether the central portions have not the power of cicatrizing independently of the edges. I can only say that I have seen over and over again islands forming widely separated from the edges in cases where the destruction or removal of true skin had been total. This process much abbreviates the time required for healing.

HEREDITARY DEAF-MUTISM.

By T. McCALL ANDERSON, M.D., F.F.P.S.
Physician to the Deaf and Dumb Institution; Physician to the Dispensary for Skin Diseases, etc., Glasgow.

In the *Medical Times and Gazette* of August 15, I observed a most interesting case of hereditary deaf-mutism, cited by Dr. A. Mitchell. Owing to my connexion with the Deaf and Dumb Institution and the Dispensary for Diseases of the Ear, I have too frequently had the opportunity of observing cases illustrating the hereditary transmission of this defect. It is not my intention to discuss this subject fully, but merely to bring under the notice of the readers of this journal a most extraordinary case, of which I was put in mind by the perusal of Dr. Mitchell's paper, showing to what a lamentable extent deaf-mutism may be transmitted from generation to generation. It is extracted from the thirty-fourth annual report of the Glasgow Institution for the Education of the Deaf and Dumb:—

"A progenitor had two hearing daughters, by one of whom he had two great-great-granddaughters deaf and dumb, the daughters of a hearing great-grandson; and two deaf and dumb great-great-grandsons, the children of a hearing great-granddaughter. By the other daughter he had two great-grandchildren deaf and dumb, the children of a hearing granddaughter. He had also by a hearing son four deaf and dumb great-great-grandchildren, the children of a hearing great-granddaughter. A brother of the progenitor has had by two hearing grandsons eight deaf and dumb great-great-grandchildren, and one great-granddaughter, who is the mother of one of the great-great-grandchildren. One of the grandsons had two hearing daughters, who married. One of them had five children, the other two deaf and dumb children. The grandmother of this grandson's wife had a brother who had a deaf and dumb son, and three deaf and dumb great-great-grandchildren descended from the deaf son; so that in this branch of the family deafness is hereditary on both father's and mother's side. The other grandson had a daughter deaf and dumb, who is the mother of a deaf son mentioned above. Nine of these mutes have been pupils at the Glasgow Institution, and have all been of very superior intellect." This statement was put together by Mr. Anderson, the highly-valued teacher at the Institution in the year 1855. In 1862, I examined two deaf mutes, who were admitted to the Institution, who were connected with the above family, though I could not find out the exact relationship, thus showing that this taint is still being transmitted from generation to generation. And I am informed that there are a number of other persons who are deaf and dumb, and are likewise connected with this family, though their cases have not been jotted down, owing to the difficulty of getting correct information as to the precise relationship.

(e) Two rough drawings of these casts accompany this paper. No. 568, before the operation, shows the lower jaw drawn down by the cicatrix almost to the sternum. The chin quite effaced. The whole front and sides of the neck occupied by the cicatrix. The cast was limited by the eversion of the lower lip preventing the further application of the plaster of Paris. No. 569, after the operation, shows that the full distance between the lower jaw and sternum had been regained, and the chin decidedly prominent. Many months were occupied in the cure, but when it is considered that this immense sore had to be healed, and that under a process of extension, and also that the distorted cervical vertebræ had to be restored to their normal position, this will not be wondered at. It will also appear that in a case where the cicatrix is so extensive, passing down in front of the chest, sound skin could hardly have been borrowed from that source for a plastic operation.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

BIRMINGHAM GENERAL HOSPITAL.

The following case is one of very great interest, not only clinically, but as regards the connexion of the secondary deposits of pyæmia and new growths; it appears to be a link between the two. The reader will find this subject brought forward by Dr. Wilks in his article on pyæmia in *Guy's Hospital Reports* (1861). He writes,—"As pus produces pyæmia, and fibrin fibrinous deposition, so we think that an inflammatory product which has no tendency to progress to the stage of pus, may induce secondary deposits of the same kind in other parts of the body." He gives the following case, which differs, however, from Dr. Russell's case in having a clear history of injury; the characters of the tumours, however, are pretty much the same in both :—

Fibrinous Tumours in Skin and Viscera.—Susan G., aged 45, was admitted into the Hospital on March 13. She was then extremely ill, was thin, and had a marked sallow hue. She said she had been ill only three weeks, but could scarcely declare what ailed her. A lump was found on her head, which she attributed to a blow received just before her illness; this, on being handled, burst, and gave forth blood and fibrin. There were then observed on the surface of the body several other lumps, of a dark colour, which appeared like blood under the skin; and the gums also at the same time bleeding, the case was first regarded as one of scurvy. Subsequently, however, as these tumours increased in size and number, and some appeared firm, it was regarded rather as melanosis. The patient afterwards had cerebral symptoms, and sank into a comatose state.

Post-mortem Examination.—Body very wasted, and of a yellowish colour. The lump on the head appeared to have contained some fibrin as well as blood. On the surface of the body there were a number of small tumours, the largest being about the size of a marble; these, when incised, were found to be quite circumscribed, of a dark-red colour, and composed apparently of fibrin; in some there was liquid blood; the brain contained a mass of the same description, and about the size of a walnut, firm and circumscribed; it had some liquid blood around it. The lungs contained each from twenty to thirty masses of the same kind; some projected on the surface, and had at first sight much the appearance of ordinary phlebitic pneumonic deposits, and such they were taken to be; when cut through, however, they resembled rather masses of apoplexy or fibrin than ordinary inflammatory products; they were circumscribed, firm, and dark red; at the lower lobe of the left lung there was a solid mass, the size of the closed fist; no lymph on the surface. The liver contained similar deposits; two of them very large, of a red colour, and resembled masses of fibrin, some soft and breaking up; the spleen contained a very large, red, fibrinous mass, and some smaller ones; these resembled rather the early condition of the changes seen in pyæmia than the wedge-shaped plugs of the usual cardiac production; kidneys healthy. The microscope showed in all these deposits a fibrillated tissue, very like the fibrin of the blood, and amongst this numerous small nuclei.

Dr. Wilks' Remarks in Reference to the above Case.—"We are unable to place such a case as this in the received category of morbid processes, but looking upon it simply as it stands, it appears as if an injury to the head, followed by fibrinous effusion, had been instrumental in propagating similar conditions elsewhere; that just as purulent effusions give rise to similar states elsewhere, so here an earlier or different kind of product had started into existence its own peculiar material."

Fibrinous Deposits in the Brain, Lungs, Spleen, Kidneys, and Testis—Hemiplegia and General Cerebral Symptoms—Death —Autopsy.

[Communicated by Dr. Russell, Physician to the Hospital.]

A complete history of the following case was not obtained, in consequence of the unexpected absence of the patient's wife, who left Birmingham as soon as she had deposited her husband in the Hospital; some particulars, however, had been obtained previously to her departure :—

The patient's illness commenced six weeks before admission with what was termed a cold, but without any symptoms of importance. A fortnight afterwards he had a fit, in which his head was drawn to the right side; his right arm was "convulsed," but he is stated not to have lost consciousness either in this or in any subsequent fit; the fit lasted four or five minutes, he then became drowsy, and fell asleep. On the following day he was quite well, though he felt weak. He has had two or three fits each week since, but none of equal severity with the first; the most severe of these subsequent fits occurred about a fortnight ago. About three weeks since he began to lose the use of his right arm, the paralysis being preceded by a sense of numbness and pricking in the hand; in a short time the leg on the same side became enfeebled, and his intellectual power began to fail. He had never suffered from fits before; his habits had been generally temperate, but, in the year 1861, he drank large quantities of ale, and grew very stout. His wife referred the patient's illness to excessive sexual indulgence. The present is his second wife; he has been married to her five years; during the first four years of their married life he was moderate in his indulgence, but during the last year he has insisted on having connexion every night, and occasionally twice in the night. She described him as being a man of strong passions, and stated that he became greatly excited in sexual intercourse —"he seemed as if he would have eaten me up." Of late he felt much exhaustion during the day in consequence, and she frequently warned him that he was injuring himself. She firmly believes that he was strictly faithful to her; he has never had any venereal affection; this he asserts most positively. His father is still alive and well; his mother died of phthisis.

He was a large made, stout man, with rather florid complexion, and remarkably free from any appearance of cachexia. At admission his pulse was 92, feeble; respiration 32, much hurried by nervous excitement when he attempted to talk. He had complete paralysis of the right arm; incomplete paralysis of the corresponding lower extremity; sensation was decidedly impaired in the arm, and to a much less extent in the leg; reflex action was perfect in the leg. The mouth was slightly drawn to the left side; the tongue was protruded in a direct line. His face was heavy and unintelligent, but his power of comprehending questions was perfect. Articulation was distinct, but he was unable to find his words, so that he came to a stand almost immediately after having commenced a sentence; thus, he could not state how many days it was since his bowels had acted, but on being desired to indicate the figure by his fingers he at once held up two, and being corrected by a neighbouring patient who had seen him go to the closet, but desiring to inform us that he had passed no stool, he could only speak of making water. His pupils were small, and not very dilatable, but equal. Micturition and defæcation were performed rationally. He had no arcus senilis; the arteries were healthy. The sounds of the heart were feeble. Of the condition of the lungs, it was noted that there was dulness on percussion over a space corresponding to the right lower lobe, and that the respiratory sounds were feeble over the upper part of the left side in front. He did not complain of any symptoms referrible to his chest.

The patient's decline was very rapid. In two days from the date of the preceding report he could utter only the first word of a sentence, and mumbled quite inarticulately; his respiration was noted to be 36, and drawn quickly; pulse 100; his urine was found to be quite healthy.

In three days later urine was passed unconsciously, the power of the right lower extremity was almost extinguished, though some reflex movements were executed. The tongue deviated somewhat to the right; the right side of the mouth was somewhat inert. He eat with difficulty, rolling his food in his mouth. The pupils were equal, and of medium size. On the fourteenth day after admission he had nearly lost the power of swallowing; all his evacuations were passed unconsciously; the right pupil was more dilated than the left. He had become quite indifferent to anything passing around him. He died two days afterwards.

It has not been mentioned that at the first examination the left testicle was found to present a considerable degree of enlargement, forming a uniform ovoid tumour, larger than a hen's egg. No pain was experienced on compressing it, nor was any reference made to it in his complaints.

Autopsy, Sixteen Hours after Death.—Head.—The membranes of the brain were healthy. The convolutions of the left hemisphere of the brain, over a considerable space at the vertex, were visibly flattened and compressed one against the other, strikingly contrasting with those on the opposite side, and a single streak of greenish lymph occupied a sulcus between two convolutions, the outer surface of the arachnoid remaining quite glossy. Just beneath this spot, and seated at a depth of a-quarter of an inch, lay a fungoid tumour embedded in the substance of the hemisphere. It was of an irregularly spheroidal shape, and about the size of a large walnut. It occupied the white substance of the hemisphere, but had involved one deep convolution. It was separated by a considerable space from the corpus striatum and thalamus, which were perfectly healthy, but were not examined microscopically. The surrounding cerebral tissue, for a considerable extent, was stained of deep yellow, but was of perfectly normal consistence up to the very margin of the tumour. A second tumour, of precisely the same character, the size of a pea, was present in the under portion of the right posterior lobe at its surface; and a third, as large as a hazel-nut, hung to the dura mater, just above, by a very slender pedicle, and was embedded in the substance of the brain. Every other part of the brain, including the vessels at the base, was perfectly healthy. Over an ounce of cerebro-spinal fluid was contained in the sheath of the spinal cord. The cord itself was healthy, excepting that its middle third was softer than the remaining portions. No deviation from perfectly healthy structure could be discovered by the microscope in the cord, even in the softer portions, excepting a few large granule masses sparsely scattered through its fibres in a few places. Chest.—The heart was healthy; a deposit of fat had taken place on its surface, but not in quantity disproportionate to the general condition of the patient. More than three-fourths of each lung were completely converted into fungoid matter; the right lower lobe was entirely occupied by this abnormal tissue; in the other parts the fungoid matter formed isolated tumours, varying from the size of a walnut to that of a full-sized orange. The roots of the lungs were healthy, as were the bronchial glands. Abdomen.—The liver was quite healthy. One extremity of the spleen was occupied by a fungoid mass larger than a walnut; the remainder of the organ was healthy. In each kidney were several small tumours of the same character, all situated at or near the surface. In other respects the tissue of the spleen and kidneys was healthy. Several of the lumbar glands presented the same degeneration, and small fungoid tumours existed in the fat surrounding the kidneys. The left testicle was entirely converted into a tissue precisely resembling that described in the other organs; it was perfectly regular in shape, and was enclosed in its capsule. The spermatic canal and its contents were healthy. The structure of the various tumours previously described was identical; it much resembled fibrin deeply stained with blood, was dry and crumbling, and contained small masses of extravasated blood. By the microscope the general structure was assimilated more to fibrin than to any organised tissue; it presented only a very few cells and some nuclei, but no well-formed fibrous tissue.

ST. BARTHOLOMEW'S HOSPITAL.

CASES OF LATENT SYPHILIS.

(Under the care of Mr. HOLMES COOTE.)

In reply to an inquiry addressed by Faye to Medical Practitioners in all countries "On the Influence which an Anti-Syphilitic Mercurial Treatment of Parents has on the Health of their Children," Hebra draws certain deductions from ten cases occurring in his private practice, among which conclusions we find the following:—"Syphilis may remain latent in the body, without discovering itself by any symptoms, and first betray itself by the syphilitic affection of the children."—("Year-book of Surgery," 1860, p. 322.) By which is meant, that a man may contract syphilis, and fancy himself well, and yet after marriage, at some distant period, while in apparently perfect health, beget children, who may become the subject of the syphilitic taint in a constitutional form. The great difficulty in obtaining perfectly reliable information on these questions from patients must be admitted by all, but still, with care, we may arrive at a close approximation of the truth.

Hebra states a fact which has been recognised by many in the Surgical practice at St. Bartholomew's Hospital for a long period. The two following cases, which came under Mr. Coote's care on August 15, 1863, illustrate, he considers, Hebra's views:—

Case 1.—Jane M., aged 27, a healthy-looking young woman, married three years, came to the Hospital bringing an infant covered from head to foot with syphilitic psoriasis. She said that the eruption showed itself a few days after birth, and the child had since pined and become emaciated. She added that she had had one other child about eighteen months previous, which was born dead. The closest inquiries were made as regarded both her own health and that of her husband. She replied readily and frankly, with the full knowledge of the purpose of the question, and assured us that no illness had shown itself on either herself or her husband in any way during their married life. The child was ordered two grains and a-half of mercury and chalk twice a-day, and is going on favourably.

Case 2.—Elizabeth A., aged 16, a slightly-made, pallid child, living with her parents, came to the Hospital with a circular and perforating phagedænic ulcer of the soft palate, the size of a sixpence, with tawny surface and inflamed circumference. There were adhesions of the left iris around the pupillary margin, but no indications of recent iritis. She was questioned with care, consideration being of course shown to her youth, and it was obvious that she was innocent of any irregularity. It was also denied that either parent had ever suffered from syphilitic disease during married life. The edges of the ulcer were touched with nitric acid diluted with five parts of water. She was ordered three grains of iodide of potassium in sarsaparilla. The case is going on well.

Hebra adds that the reverse may happen, viz., fathers infected with general syphilis may neither infect their wives nor produce syphilitic children. In illustration of this statement, I mention the following case:—

Case 3.—Thomas W., 38, a respectable man, contracted syphilis twelve years ago, and only on that occasion. He had an indurated chancre at the reflection of the prepuce on the glans penis. It was treated with mercury and disappeared, and the man remained well for two years, when he became the subject of syphilitic lepra, chiefly affecting the arms, chest, and head. In course of time the eruption disappeared, and seven years ago he married. His wife and children are in good health, but he is subject to syphilitic ulceration of the tongue and fauces, and to occasional attacks of lepra in a slight form.

THE ROYAL LONDON OPHTHALMIC HOSPITAL.

CASE IN WHICH INHERITED SYPHILIS AND ACQUIRED SYPHILIS CO-EXISTED.

(Communicated by Mr. HUTCHINSON.)

The following case affords proof that a patient who, in infancy, has suffered from inherited syphilis, may, in adult life, contract a primary sore, and have it followed by ordinary constitutional symptoms,—rash, sore throat, and iritis. We may note, however, that although it is quite certain, from his mother's statement, that both his parents had been the subjects of syphilis, and that he himself in infancy suffered from rash, yet that his symptoms had been, on the whole, light. He was not born till six or eight years after the date of disease in his parents, and neither his physiognomy nor his teeth showed the peculiarities which are usually seen in those whose infantile symptoms have been severe. I did not at first recognise him as one of this class, and it was only when his corneæ passed into an unmistakable condition of interstitial inflammation that my suspicions became aroused.

Let us also note, as a very interesting point, that this attack of interstitial keratitis occurred about ten months after the outbreak of acquired disease, although we must also bear in mind that there was a history of inflammation in one eye several years before. Now, I have never once seen interstitial keratitis as a sequel to acquired disease; it occurs solely in the subjects of inherited taint. In this case we might suspect that the eye disease was modified by the two sources of contamination, or that the hereditary taint was roused into activity by the acquired one. There was iritis as well as keratitis present.

History of Syphilis in both Parents Six Years before Birth of our Patient—Slight Infantile Symptoms—Acquired Syphilis at the Age of Twenty—Constitutional Sequelæ—Interstitial Keratitis—Teeth and Physiognomy presenting no Peculiarities.

E. M. H., aged 21, was admitted under my care on July 6, 1863. His right cornea was inflamed, and he stated that it had followed an injury from lime a fortnight before. The cornea was diffusedly opaque, and the eye very irritable. I prescribed, at first, tonics internally and opiate fomentations, being misled by his statement that he had had lime in it. On the 20th I recognised iritis in slight degree, and the dotted condition of the cornea, taken with the slight inflammation of the iris, presented a condition similar to what used to be called aquo-capsulitis. Iodide of potassium was now prescribed. In the middle of August the left cornea began to inflame. At this time the right cornea was so opaque that it was impossible to inspect the iris, and it presented exactly the condition of syphilitic keratitis. His physiognomy did not suggest hereditary syphilis. It is true his skin was pale and of bad colour, but his nose was narrow and with a very high bridge, and his teeth were perfect in form, size, and colour. In making inquiries as to his history, he mentioned that his mother had suffered in her eyes, and, thinking that some light might perhaps be obtained in respect to his own diathesis, I requested that she should attend.

His Mother's History.—On August 27, Mrs. M. attended with her son, and brought with her one of Mr. Bowman's out-patient letters. From notes on the latter I found that iridectomy for synechiæ and relapsing iritis had been performed six years ago. She had obtained great benefit from the operation. There were still bands of synechiæ in the lower part of the pupil. The original attack of iritis had occurred twenty-five years ago. On being taken aside, Mrs. M. told me without reserve the whole history of her troubles. Her husband had been a most dissolute man, had frequently suffered from venereal diseases himself, and had communicated sores to his wife several times. Her worst attack was when the iritis occurred, at which time she had a very free rash. Several of her children had died of "the disease." Our patient was one of her younger children, and was born six or seven years subsequent to his parent's contamination. The three infants preceding him had all died. In infancy he suffered from a rash, and was treated by Dr. Rees, who referred it to venereal taint. After infancy he had fair health, until about the age of 16, when his left eye inflamed.

Acquired Disease.—He was under my care for gonorrhœa four years ago, and since that has been much exposed to risk. A year ago he appears to have had true syphilis. He does not recollect a chancre, but he had a copious scaly rash and a bad sore throat. These lasted for three months or more. The Surgeon whom he attended told him it was syphilis, and gave him mercury to salivation. Although he did not recognise the chancre, I think there can be little doubt that he had one. His description of the rash is very minute, and numerous spots occurred on the penis and scrotum, so that it is very possible he may have mistaken the original one. Since it was well he has had a sore and also gonorrhœa. He still has the remains of a papular rash on his chest.

THE LONDON HOSPITAL.

STRANGULATED HERNIA IN A CHILD AGED TWENTY MONTHS — OPERATION — CLINICAL REMARKS.

(Under the care of Mr. MAUNDER.)

F. M., aged twenty months, who had been the subject of inguino-scrotal hernia since he was three months old, was admitted into the London Hospital on December 2, with a firm pyriform tumour of the scrotum prolonged into the inguinal canal; the testicle, clearly defined, occupied the bottom of the scrotum. The nature of the swelling was evident, and constitutional symptoms of strangulation had existed four days. The integuments of the scrotum were abnormally red. Taxis had been applied prior to admission. Chloroform was administered, and gentle taxis applied for a few minutes without effect. The impulse caused by compression of the scrotal tumour was prolonged along the inguinal canal, and ceased at the position of the internal ring; at this point was the seat of stricture. To the hand, during taxis, a crepitation was communicated, as if either fluid were being displaced from between two surfaces, or two rough surfaces were being rubbed together. The operation disclosed fluid in the sac.

Operation.—All the tissues external to the sac having been divided, the finger detected the internal ring constricting the neck of the sac, and only admitting the finger-nail between them. The ring was nicked sufficiently to admit the tip of the forefinger, but still taxis failed to effect reduction, while, at the same time, the finger inserted beyond the ring received impulse when the scrotal tumour was compressed, and led to the conclusion that the obstacle was not at the mouth of, but within the sac. This latter was now opened sufficiently to admit the finger to explore, and the member readily traversed the mouth of the sac into the abdomen, and found no adhesions nor other obstacle to reduction anywhere, but the bulk of the protrusion itself. With some difficulty the hernia was reduced. The testis did not occupy the sac. The patient died on the fifth day.

Autopsy.—The autopsy sixteen hours after death disclosed evidences of acute general peritonitis; the last six inches of the ileum were congested, and lying just within the internal ring; the corresponding portion of the mesentery was rendered thick and fleshy from extravasated blood within, and from inflammatory exudation both within and without its substance. These parts had doubtless occupied the sac.

Clinical Remarks by Mr. Maunder.—Many of you gentlemen now present witnessed the operation, and observed the difficulty I experienced in effecting reduction both before and after opening the sac. The cause of that difficulty is now explained in the thickened mesentery, and I do not hesitate to say that I regard this child as a victim to ill-judged taxis. The taxis is a valuable resource in cases of strangulated hernia, but it may be abused either in its forcible or violent application, or by frequent repetition. I would say apply the taxis once, or at most, twice, give it a fair trial, and then put it quite aside. The principle of the taxis consists in the endeavour to diminish the bulk of the tumour, first, by expressing the venous blood collecting in the vessels of the hernia as well as any serum effused, and secondly, in reducing the contents of the bowel, if bowel there be, and the protrusion itself. This object is not to be attempted by a violent pushing of the tumour bodily against the aperture by which it made exit, because by this means the mass would be spread out around the ring rather than be guided through it, but the swelling is to be compressed upon itself by the hand of the Surgeon, and, as it were, narrowed and elongated, while slight pressure only gives it a direction the reverse of that by which it descended. Compression should be exercised at first gently and slowly, but increasingly and continuously for the space of from five to fifteen minutes, in proportion to the size of the tumour. I think the fatal issue of the case before us may be fairly ascribed to the taxis, because, had it not been for the thickened mesentery, reduction would have been effectual, I believe, without opening the sac. As a general rule, less evil will result by an early use of the knife than by delay and the repeated taxis.

TORBAY INFIRMARY.

FRACTURE OF THE FEMUR BY DIRECT VIOLENCE — DELIRIUM TREMENS TREATED WITHOUT ALCOHOL OR NARCOTICS — USEFULNESS OF PLASTER OF PARIS BANDAGE.

(Under care of Mr. J. B. TOOGOOD.)

[Reported by Dr. W. B. WOODMAN.]

Robert M., aged 62, a man of exceedingly intemperate habits, who had been a marine, but now worked as a quarryman, earning about 12s. per week, and spending nearly all that as well as his pension on stimulants, was admitted an in-patient on account of a fracture of the right femur at about the junction of the upper and middle thirds, with a punctured wound on the outer side, which, although deep, did not appear to communicate with the fracture. A large, pointed stone had rolled down upon him whilst at work, producing the lesions described. Lint compresses were applied close to the wound, and a long splint adjusted. The wound healed kindly, but on the fifth day he was attacked with delirium tremens, and began to be extremely restless, trying to get up, to take off his splint, etc. He was carefully watched; all alcoholic stimulants cut off; the ward kept freely ventilated; strong beef-tea and plenty of eggs given him, and strong coffee every two or three hours, which he seemed to like much. The bowels were kept gently open, and salines and mild diuretics given for two or three days, at the end of which time he became quite rational. But at the commencement of the fourth week no progress appeared to have been made in the union of the fracture. A bed-sore had begun to form on the sacrum, which, in spite of air-cushion, etc., continued to spread with frightful rapidity, and he was again threatened with delirium tremens, beginning to try to take off the splint, etc. His appetite failed, the tongue and pulse assumed a typhoid character, and the case looked very ugly. The splint was therefore removed, and the whole limb firmly encased in a plaster of Paris bandage, put on in the manner recommended by Professor Gurlt. He was thus enabled to turn on his side. A large poultice with Condy's fluid was applied to the back, and the beef-tea, eggs, coffee, etc., resumed, but no stimulants, nor any narcotics or sedatives.

Under this treatment he became rational, the sore cleaned and began to heal, his appetite improved, and he gained weight. Six weeks after the plaster bandage was removed, and good union had taken place, with only three-quarters of an inch shortening, although no extension had ever been possible. At the end of another month he was discharged cured, in better health than he had been for months, and, thanks to the enforced abstinence, with clearer intellect and a quarter's pension unspent.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 5.

◆

MEDICAL CASUISTRY.

A Study of Hamlet, by John Conolly, M.D., D.C.L., Fellow of the Royal College of Physicians, is a title as attractive as the volume itself is entertaining. Medical men cannot fail to be pleased when one among us so highly and deservedly esteemed comes before the world at large in a character purely or mainly literary, showing not only scholarship and sense, but also a manly interest in general topics. Nor will the public undervalue his willingness to lay open stores of professional experience for their information, for the elevation of the stage, and for the right interpretation of our great national poet's greatest tragedy.

It is not our present purpose minutely to analyse this pleasant and conclusive little book. It acknowledges that the original legend represents Hamlet as feigning madness, and investigates the question whether, when partly adopting the model, Shakespeare intended simply to pourtray the feigning of madness, or designedly drew a representation of one of the most delicate of the many shades of a mind really disordered. The reader will assuredly agree with the author's view, that "the mind of Shakespeare, exercised on the old story of a simulated insanity, imagined the finer outline of a mental condition in which there is a partial disturbance of reason, and that not continual, but fitful, often rectified, often returning, and productive of perplexing inconsistency of thought and action."

The application, however, of Medical and Psychological research to a fictitious character, even though a creation of one of the noblest intellects which ever adorned the world, appears to open a wide subject and one worthy of farther consideration. For great as is the interest attaching to such efforts, and extensive as are the uses they may serve by way of illustration, perhaps they present special liability towards an overstrained estimate of their authenticity, and encourage an inclination to reason from results thus obtained, as though from admitted and objective realities.

The founding of a political or ethical system on invented or constructed materials is no new exercise of philosophic ingenuity. It has been known ever since Plato fabricated his model republic with the intention of contemplating Truth and Justice in the larger and bolder characters which they there assume when reduced to concrete form and manifestation. Indeed, although the method called down the satirical comment of Aristophanes, and graver censure in more sedate minds, it cannot be refused real force; nor, aided by a theological element, was it incompetent to satisfy the acute logical intellect of a man like the author of the *Civitas Dei*.

In these later days occurrences, characters, and even modes of thought, sprung from a single inventive brain, have received marvellous development and acceptation. The novelist—that discovery of recent centuries—has come to invade every branch of social life. First, the political novel offered an easy field where satire could disport itself, where friends might be idealized into heroes, and enemies made to present in imaginary action all the vices and foibles with which the author credited them. Then came the era of the theological novel, where either the unregenerate of the outer world were compared with the chosen of some favourite sect or opinion, or where the hypocrisy of "professors" was contrasted with the sober excellence of those who aspire to nothing higher than morality. Our readers' recollection will supply a host of similar instances; there is the legal novel, the military novel, and even the sporting novel, all to some extent dogmatic, and aiming at the propagation of their authors' views. But the climax seems near, and in the Medical novel we shall doubtless, before long, have a convincing demonstration of some pathological principle or some line of treatment hitherto unheard of supported by records of cases drawn from the fertile imagination of an idealistic Physician.

Already the Medical man has begun to figure with suspicious frequency on the stage, or in narratives like the really able novel, "Two Years' Ago," where Mr. Charles Kingsley has turned the force of his picturesque accuracy to the work of deterring from drunkenness by the dread of delirium tremens, and of advancing sanitary reform by the description of an epidemic. Nay more, we have ourselves recently noticed a work which all but comes up to the definition we have just foreshadowed. Fortunately, the "Sick Room and its Secret" seems as innocuous from its bland dulness as the eau de gomme of some foreign disciple of the expectant system. At the risk of impeachment for self-laudation, and in entire innocence of their authorship, we cannot but heartily coincide with the criticisms which this effort called forth in our last number. "If the authoress," says our unknown but revered coadjutor, "wants to preach about fresh air, pure water, and light, she should do so without the dreary machinery of unreal characters spun like cobwebs out of her own brain."

It is, indeed, true that the time-honoured authority whom we first quoted allows that *ψεῦδος 'ανθρώποις χρήσιμον ὡς 'εν φαρμάκου "ειδει ἰατροῖς δοτέον ἰδιώταις δὲ ὀυχ ἁπτέον*. But it is a dangerous use for falsehood, even when regarded as a drug, to employ it in the support of views which cannot be well substantiated by facts and truth. Probably for this and similar reasons we, as a Profession, are in the habit of demanding the most exact and circumstantial fidelity in narrating the course of diseases and the action of remedies; nor should we dismiss the caution when we apply our minds to more general views and doctrines necessarily speculative in their nature.

Now, many of the able men who practice in the department of mental diseases quote and illustrate liberally from our great dramatist, and it has occurred to us, perhaps among some others, that a very possible result of such a practice might be a tendency to relax the stern laws of evidence on which only reasoning must be based in cases of insanity. There is no part of medicine which requires to be more cautiously guarded from loose theorising than the difficult and obscure study here mentioned. It is quite within probability that the hypothetical method of viewing cases, which in theological discussions is known as "casuistical," might spring up in the kindred art of medicine. Those who have read any extracts from the casuistical writers of some century or two ago, will be able to judge how strangely truth may be mingled with falsehood, and how the boundary line between justifiable speculation and unwarrantable dreaming may become obscured. A like unhealthy tone of thought is far from being inapplicable to our science, especially in that side of it which is closely allied to metaphysics and moral philosophy. Even if the stronger minds were able to withstand the temptation of substituting shadow for substance, hypothesis for actuality, there are not lacking those of a more unstable type, both within and without the pale of our corporations, who would appreciate the enjoyment of yielding to an unrestrained extravagance, and who might most seriously complicate the vexed questions of sanity, responsibility, and crime. To go no farther afield for an illustration than the recent very proper outcry against the ticket-of-leave system, does it not seem that if the plan adopted with malefactors had rested with Medical men instead of with some kind-hearted theorists, they would have justly been accused of letting their *à priori* argumentation outstrip the teaching of facts, and in labouring by an ill-advised lenity for the reformation of worthless characters, of forgetting to record trustworthy evidence that such a plan actually had succeeded, and was vouched for by reformed examples. And in our own domain, do we not meet with a very similar paralogism when sanitary matters are discussed. It is taken for granted, on purely hypothetical and unsubstantial grounds, that some things are good, others bad, some smells dangerous, some trades unwholesome, whereas we should very much strengthen our own convictions, and carry the general public far more heartily with us, if we stopped to inquire accurately and by careful observation what are the real results to be trusted as the basis of precept and legislation.

It must not be supposed that we accuse Dr. Conolly of any such confusion between real and ideal. In spite of the realism with which he dissects and demonstrates the morbid condition of Hamlet, little phrases occur here and there which show that he remembers the shadowy nature of his subject. He observes, for instance, parenthetically, "Viewing him as a real personage, which one cannot avoid doing." Indeed, there seems a touch of grave irony running through the work, as though it were a pleasant idea to submit the ethereal product of fiction to all the tortures of scientific analysis, and to summon the Prince of Denmark before a commission "De Lunatico Inquirendo." But the thought which we have striven to put in words did strike us forcibly while reading these pages, and we hope their author will consider our remarks as one more proof that his essay is not only instructive, but, to use a fashionable word of the day, suggestive.

ARMY MEDICAL DEPARTMENT.

We understand that the authorities are now very desirous of obtaining the opinions of the leading men in the various Medical schools upon the causes of the present grievous unpopularity of the Department, as well as of ascertaining their views and suggestions for its remedy.

The Horse Guards and War Office are every bit as much amenable to public opinion as any other institutions. It becomes absolutely necessary to adopt some measures by which a larger number and a better quality of candidates may be attracted to enter the Department than have lately applied.

We do trust that the expression of opinion will be clear and decided. The facts lie in a nutshell, and they are these:—1. That the spirit evinced by the Horse Guards towards the Department is such that (rightly or wrongly) it has been the source of universal discontent, particularly in reference to the abrogation of the Warrant of 1858, and the way in which the position, rights, and advantages enjoined by Warrants are meted out by a Horse Guards measure. 2. That the authorities, in defiance of common sense, seem to be desirous of obtaining a good article at a very cheap rate. The examinations may be, and we believe are, essential to the maintenance of that good standard of education and attainments required by the Government, as well as by the responsible duties devolving upon the Army Medical officer; but men of good education and standing in their schools will not forego the chances of success in private practice for the discomfort, annoyances, and expatriation of Army life unless the material advantages offered by the latter equal their prospects in the former. 3. That the evils so loudly complained of at the time of Lord Herbert's commission, and to which that statesman endeavoured to administer a death-blow, have revivified. There is now, as formerly, the same love of routine and clerk work, the same tendency to over-inspection, and the multiplication of circulars, memos, and orders. The present regulations as to Surgeons paying all the expenses of a rejected recruit are so stringent and obnoxious that there will very soon be the same paucity of private soldiers as of Medical candidates for Her Majesty's Army; and the position in which Medical officers are placed by the present mode of marking soldiers with B.C. is distasteful to their feelings, and derogatory to them as members of an educated and humane profession.

Different men will of course offer different suggestions as to the means by which the vacancies in the ranks of the Department are to be properly and efficiently supplied. We venture to make the authorities a present of our opinion.

1. By a clear and distinct definition of the rank, position, and emoluments (whatever these may be) assigned to the different grades, and the guarantee of the strictest and most impartial observance of these everywhere.

2. By the introduction of some plan for the removal of the present stagnation in promotion. This might be effected by fixing the periods of retirement at earlier dates than the present ones.

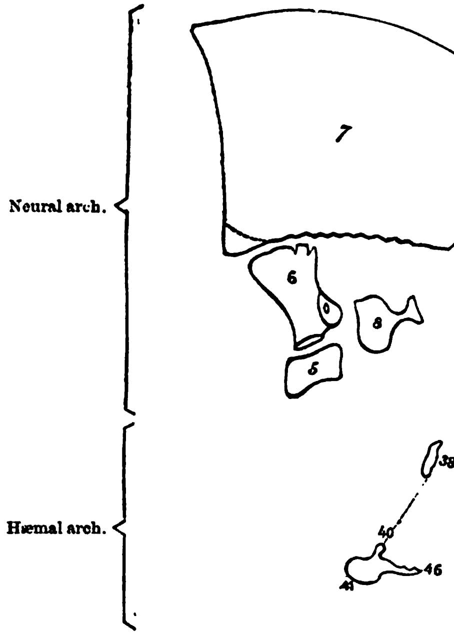
3. By the greater recognition of individual and Professional merit. We are aware that this is very liable to open the door to abuse; still the *exclusive* promotion by seniority, which at present obtains in the junior ranks, offers no temptation to a man to depart from a routine pursuit and performance of his duties.

4, and lastly. Changes are required, and could be made without detriment to the service, in the administration of the Department, and the nature of the duties required of Medical officers. As far as practicable these duties should be compounded as much as possible of the Medical element, and as little as possible of the military.

We venture to think, too, that *all* punishments as such should be inflicted on a parade commanded by a combatant officer, and not, as now, by the conversion of the Medical man, the attendants on, and the place designed for the treatment of the sick soldier, into the means and place for carrying out any sentence of court-martial. We allude to the present highly improper regulations about the marking of soldiers.

THE HUMAN PARIETAL VERTEBRA.

One of the most beautiful examples of the operation of morphological laws in the structure of the human skull is that which is afforded by the study of Man's parietal vertebra. Largest, above all other vertebra in its absolute height, width, internal capacity, and external bulk, the parietal bone in Man occupies a greater superficies than any other of the cranial bones. The central axis which supports this lofty and towering arch is not less important, as, like the bones immediately behind and in front of it, it forms a part of that *basis cranii* which is the mechanical foundation of this part of the skull, and on which the arch or parietal bones are developed. The centrum of the parietal vertebra is consequently the *basi-sphenoid;* right, left, and above it are developed the buttresses of the neural arch, the neurapophyses, or wings of the sphenoid. These, in their turn, are surmounted by the bifid neural spine, or parietal bones. Lateral extensions on either side the primitive axis form the transverse processes, or mastoid bones; the pleurapophyses ("ribs") are the styloid processes of the temporal bone; the hæmapophyses are the lesser cornua of the hyoid; the hæmal spine is the hyoid bone itself; the appendix is the thyroid cartilage. The following diagram will perhaps aid the student in the recognition of the homology of the several elements of the parietal vertebra in Man.



Parietal Vertebra.—5, basisphenoid; 6, alisphenoid; 7, parietal; 8, mastoid; 38, stylohyal; 40, ceratohyal; 41, basihyal; 46, thyrohyal.

The term "parietal segment," or "parietal vertebra," is not acceptable to some of our best vertebralists. The term "post-sphenoidal" has been proposed for the same structure, and Dr. Humphry and Professor Bertrand have adopted this terminology. As, however, the idea is the sole essential component part of our conception of this second cranial segment, we shall waive all empty terminational disputes, and proceed with our criticism of Man's parietal segment.

Ossification of the basi-sphenoid proceeds from one centre of ossification in the human fœtus. The centrum of the parietal vertebra unites with the reciprocal centrum of the occipital segment by a cartilaginous attachment in the young, which in the adult skull has been so converted into a solid bony attachment as to render the separation of the two central elements of the occipital and parietal vertebræ dependent on the use of the saw.

Such is the nature and significance of the neural arch of the parietal segment; the development of its hæmal arch is, however, far more complex. In the *Medical Times and Gazette* of November 1 last, we have endeavoured to illustrate the nature of this arch, and we shall merely here remind our readers that the pleurapophysis is formed by the stylohyal, the hæmapophysis by the ceratohyal (lesser cornu), the hæmal spine by the basi-hyal (body of the hyoid), and the appendix by the thyrohyal. It will, of course, be seen that the hæmapophysial and appendicular elements of this arch are ligamentous, or only partially ossified, and the demonstration of their true vertebral nature rests on the examination of the lower vertebrate forms.

We have now briefly surveyed the four successive vertebræ into which we deem that Man's cranial segments may be divided; but, before we finally take leave of our subject, we deem it right that a survey should be given of the various systems which have been promulgated by many other able anatomists since the classical times of Duméril, Bojanus, Kielmeyer, Spix, Carus, Oken, Göthe, De Blainville, or Geoffroy St. Hilaire.

Straus-Durckheim, the careful preparer of an elaborate monograph on the anatomy of the domestic cat, and one of the few bright luminaries which have shone forth from the midst of the teleological "slough of despond," divided the skull into five distinct segments: the basilar, sphecoidal, sphenoidal, ethmoidal, and rhinal. The four first will be recognised as more or less equivalent to our occipital, parietal, frontal, and nasal segments. The last, or rhinal segment, Straus-Durckheim created out of the cartilages of the nose—mesorhinal, spirhinal, pararhinal, etc. The division of a vertebra into two distinct arches was hardly appreciated by the French anatomist, and it is most significant—as affording a proof that "there is nothing new under the sun"—when he regarded the vomer and the lachrymal as appendices of the ethmoidal (nasal) segment.

Professor Gervais, of Montpellier, the able pupil of the illustrious De Blainville, recognises the quadruple division of the skull, as we have defined it, into vertebræ, or *osteodesmes.* He considers the vomer a kind of "apophyse acanthoide inférieure" belonging to the presphenoid, and coincides with the opinion of De Blainville and Dugès, that the hyoid apparatus is attached to the occipital, and not to the parietal segment.

Professor Lavocat, of Toulouse, has suggested an entirely novel and peculiar system of homologies. Four cranial vertebræ are recognised by him, the occipito-hyoid, correlated with the sense of hearing; the parieto-maxillary, correlated with that of taste; the fronto-mandibular (sight); and the nasoturbinal, or olfactory segment. Each of these arches is formed of ten distinct osseous elements, and we must commend the charming little work of M. Lavocat to the attention of all comparative anatomists who may not be acquainted with it.

The learned and philosophical memoir which Professor Goodsir contributed in 1857 to the *Edinburgh New Philosophical Journal,* is, however, more familiar to our readers. As they most likely are aware, the great feature of the work is the adherence which its author pays to embryology, and the minute investigation which is devoted to the study of development. The number of cephalic vertebræ (or "sclerotomes") varies, according to Professor Goodsir, in the vertebrata. In Mammalia (excepting Proboscidea), and in Crocodilia there are seven vertebræ; in birds, amphibia, other reptiles, and fishes (excepting *cyclostomi*) only six. The seven segments in Mammalia (to each of which is attached a hæmal arch) are termed occipital, temporal, postsphenoidal, presphenoidal, ethmoidal, vomerine, and rhinal. The whole work abounds in every sentence with suggestive ideas, and will doubtless for many years form the source whence many ephemeral systems of morphology will be drawn, while the source from whence they are derived will be sedulously concealed.

Dr. G. M. Humphry, of Cambridge, produced some years ago at the British Association meeting one of the most important vertebral systems which has ever been promulgated. The skull, according to him, is divided into four distinct segments, the occipital, postsphenoid, presphenoid, and æthmoid. The centrum of each of these vertebra is divisible into a central, or supra-central, and an infra-central element, as the following diagram (in which we have slightly altered Dr. Humphry's names) may, perhaps, show distinctly :—

	Occipital vertebra.	Post-sphenoid vertebra.	Presphenoid vertebra.	Ethmoid vertebra.
Supra-central (epapophysis?)	?	Posterior clinoid. Hinder part of olivary tubercle.	Forepart of olivary tubercle.	Crista galli.
Central.	Basi-occipital.	Basi-sphenoid.	Presphenoid.	Median plate of ethmoid — prefrontal?
Infra-central (hypopophysis?)	Pharyngeal tubercle.	Hinder part of rostrum.	Forepart of rostrum.	Vomer. (a)

The elegant and lucid hypothesis which Dr. Humphry propounded naturally produced an animated discussion, and has had its influence, we believe, on the minds of many comparative anatomists. We must not here allude to the work on the limbs of vertebrate animals which has been published by the same author, in which the same scientific spirit is manifest.

M. Camille Bertrand, the colleague of the accomplished Gervais in the museum at Montpellier, has recently published a work on the "Bony form of the Head in Man and Vertebrata," which has taken a high place in the literature of the subject. The work, however, is rather of an educational than of a novel or original character. M. Bertrand's most striking conclusion is that the thyrohyals do not belong to the parietal vertebra; and he alleges that their mode of origin and their connexions demonstrate that they are the hæmal arch of the occipital segment. He considers the other hyoid bones as belonging to the parietal segment.

The lectures which Professor Huxley, F.R.S., has recently delivered at the Royal College of Surgeons are now appearing *verbatim* in the *Medical Times and Gazette*.

Professor W. Macdonald, of St. Andrews, has propounded a system of vertebral anatomy in which the homologies of the skeleton, especially in fishes, are illustrated by reference to the modifications observed in the Annulose animals. The segmental division of the skull, according to Professor Macdonald, differs considerably from that which other morphologists have proposed, and we fully admit the entire originality of the system he advocates.

The above brief sketch of the present state of our morphological literature is, we think, called for by the state of apathy which exists on the subject in so many quarters; an apathy which we believe will at once vanish when anatomy in England shall be regarded as indeed a subordinate branch of biology, and not merely viewed in relation to the requirements of practical Surgery.

THE POOR OF PARIS. — The population of Paris amounted in 1861 to 1,667,841, and according to M. Vee's new work on the "Legal Pauperism of Paris," there were the names of 90,287 individuals inscribed on the charitable registers, *i.e.*, one indigent person to 18,047 persons; of these 23 per cent. only were Parisians.

THE WEEK.

HODGES *v.* CHALMERS AND OTHERS.

OUR readers will be very glad to learn that the action brought against the Surgeons of the Northern Hospital, Liverpool, by the patient whose thigh was accidentally fractured during attempts at reduction, has ended in the judge nonsuiting the plaintiff on the ground that there was no evidence of negligence on the part of the defendants. The following report of the case appeared in the *Times* of Monday:—

"The plaintiff in this action, who is deputy-registrar of the Court of Passage in Liverpool, sued the defendants, who are Surgeons at the Northern Hospital, for negligently performing an operation upon him.

"The Attorney-General and Mr. Littler were for the plaintiff; Mr. Brett, Q.C., Mr. Mellish, Q.C., and Mr. C. Hutton for the defendants.

"From the evidence of the plaintiff it appeared that as he was walking from the Town-hall to St. George's-hall, in the year 1861, he fell down, and dislocated his thigh. In the winter of that year, there being a very severe frost, and being apprehensive of again falling, he consulted Mr. Hakes, one of the defendants, who recommended him to go to the Northern Hospital, where he would have the assistance of his colleagues. Here the operations performed upon him were minutely described by the plaintiff, who remained there four or five months. He suffered very much, and from the giving way of the appliances, and on one or two occasions it was alleged that the operations were unsuccessful.

"At the close of the plaintiff's case,

"His Lordship decided that there was no evidence of negligence on the part of the defendants to go to the jury, and a nonsuit was accordingly directed."

It seems, nevertheless, from this case that Medical officers to public charities are liable to be sued for damages by persons obtaining relief if the latter suppose themselves neglected or maltreated This certainly is a very serious fact, and may result in a vast amount of injury and annoyance to the Profession. If the experiment were often tried, no Surgeon or Physician who has any regard to his peace of mind and reputation would consent to hold a Hospital or Dispensary appointment. It is to be hoped that the judges will consistently set their faces against such iniquitous proceedings. We fear it would be useless to appeal to Parliament for any special legislation on the subject, but the public may rest assured that if such actions are encouraged it must so fetter the hands of Hospital Surgeons that they will hesitate to undertake operative proceedings in which there is any chance of misadventure. Our readers will recollect a case of dislocation of the femur lately published in this journal, in which attempts at reduction were declined by a Surgeon on the ground that the bone would probably break and an action might be commenced against him. The decision of Mr. Justice Mellor, on which we warmly congratulate Mr. Hakes and his colleagues, will not pay their legal expenses nor compensate for the annoyance they have suffered. No one can wonder if others pause before they subject themselves to the same risk and loss.

THE LATE DR. PARDEY.

DR. BULLAR, of Southampton, has favoured us with a touching memoir of the late Dr. Pardey. It is the old story. Dr. Pardey came up to London "an unknown student, with the scantiest means, and no scientific London friends; and by his own hard work and earnest perseverance, he took at King's College and the London University honours in nearly every subject Medical, and akin to medicine,—gold medals, prizes, exhibitions and studentships, so that he is still remembered there as a pupil who took more prizes than any other, and was considered the most distinguished student of his day."

"He possessed," continues Dr. Bullar, "in a high degree, the mental requisites *for this kind of success*. His memory was very good, and he had great power of concentrating his attention."

(a) See for the table from whence the above is modified the *Transactions* of the British Association for 1858.

We hope that Medical students,—and we should like to see a copy of Dr. Bullar's paper put into the hands of every student in the kingdom—will well weigh what follows :—

"Although perseveringly industrious, yet like men of his sensitive and impulsive temperament, in preparing for the actual examination, he waited until the time drew near, and then threw himself wholly into his work, labouring day and night with slight intermission, and there can be no doubt that this disregard of the laws of health weakened his body and shortened his life. Indeed, he was one of those whose physical powers are not equal to the mental. His energy and determination of character impelled his brain to the requisite exertion for a short period of excessive action, but such unnatural tension told fearfully on the body itself. *It is such men who do less in after life than is expected from them from their success as students*, for the work of life requires physical strength and endurance as well as mental power, and they have wasted their vital energies."

Dr. Pardey's fate should be a warning. All exhausting book work, all the straining after prizes, all those efforts to cram the brain with knowledge, not as the gentle dew or shower, but as a tropical hurricane, which destroys what it ought to fertilise—their natural tendency is to a feeble life and early death. Dr. Pardey died of consumption at 36. Whilst praising Dr. Bullar's well-meant memoir, we must take exception to the hollow, sickly, and thoroughly untrue "Dairyman's Daughter" kind of sentimentality with which he concludes it. We consider a long life of hard useful work to be in all ways better than an early death, and deny that a short life is "the most successful one," merely because its close is brightened by the consolations of religion.

THE FLEXOR OF THE GREAT TOE IN MAN AND APES.

A DISCUSSION took place in the Zoological Section of the British Association, on Monday last, between Professor Rolleston and Mr. Carter Blake, on the old battle ground of man and the anthropoid apes. The discussion was commenced by Professor Rolleston, who attacked a statement made in a late number of the *Edinburgh Review*,—that the muscle flexing the great toe in apes is also a flexor of the other toes, whereas in the human foot it is a single muscle acting solely on the great toe, the effect of which the writer of the review illustrated by the pirouette of the dancer. Professor Rolleston contradicted the statement, asserting that in man the flexor is connected by slips with the other toes as well as with the great toe. Mr. Blake defended the assertion in the *Edinburgh Review*, on the ground that all that it could be fairly construed to mean was that the force of the muscle was concentrated on the great toe, which was not the case in apes. The anatomical fact we believe to be that the flexor longus pollicis in man is connected by a tendinous slip with the common flexor, but whether the existence of this accessory slip can fairly be said to bridge over the difference between his muscle and that of the great ape's is an open question, albeit we think one of very small importance. We should not have noticed it here had it not been for the curious and disproportionate display of warmth which the discussion appears to have produced.

THE ANTIQUITY OF MAN.

THERE seem to be signs in the scientific horizon of a change of opinion, or rather, we should say, of a return to a former doctrine in the interpretation of geological phenomena. It will be known to all scientific readers that the current of belief has for some years set in favour of the uniformitarian school of geology,—a school which reads the events of the past entirely by the light of the present, which finds in the action of existing causes (an unlimited lapse of time being allowed) a full explanation of all the stratigraphical changes which a study of the crust of the earth reveals. This school has to a great extent supplanted that of the catastrophists, who recognised in the gigantic revolutions indicated by the elevations, depressions, and contortions of strata evidence at least of exacerbations and remissions in the action of natural causes, and of the operation of subterranean forces unexampled in historic time. Sir Charles Lyell has been the apostle of the uniformitarian doctrine, and in his recent work on the Antiquity of Man has applied it in such a manner to the geological evidences of man's early existence as to carry that existence back to a period, very many hundreds if not thousands of centuries remote from the received chronology. A very able article in the last number of the *Edinburgh Review*, written it is said by a well-known geologist, contains a careful examination of the whole subject, and well deserves the consideration of those who are inclined to follow Sir Charles into the shadow-land of unlimited, and, as far as we can see, illimitable time. The facts of recent discoveries are not for an instant disputed by the reviewer. The discovery of human implements in the post-pliocene beds of Amiens and Abbeville associated with bones of the great quadrupeds of the mammoth fauna, the human remains probably of the same period in the caves of Aurignac and Engis, even the Moulin-Quignon jaw-bone, are all admitted, together with the other geological facts, of which we have from time to time apprised our readers. A high antiquity, some thousands of years higher than the chronology of Usher, is claimed by the reviewer for these early traces of our race. But he enters a firm protest against the enormous calculations of which we have lately heard so much, and which have their sole foundation in the *à priori* reasoning of the uniformitarian school. We regret that space will not allow us to give a complete abstract of his article, we can only indicate one or two points illustrative of the line of argument.

It will be remembered that in the valley of the Somme there are two terraces of brick earth in which flint implements, together with the bones of extinct mammalia, have been found. One of these, the Moulin-Quignon terrace, is 80 to 100 feet above the level of the sea; the other, the terrace at Menchecourt, is only 40 feet above the sea level. If we suppose that these terraces, called respectively the high level and low level gravels, were produced by the diurnal operation of ordinary causes, such as the quiet action of a river even much larger than the Somme, we must allow an enormous time to have elapsed between their formation. But the composition, arrangement, and organic and artificial contents of the high and low level gravels exhibit a marked uniformity of character, the only difference being that the low level gravel contains marine shells, indicating that at the time of its deposition the tide must have advanced thus high in the valley. The reviewer reasons that this uniformity of character and products is a more convincing argument for the periods of deposition not being very remote from each other than any difficulties involved by such a supposition are sufficient to counteract. The blocks of tertiary sandstone found in the valley have been held to require glacial agency to transport them. If we imagine the action of ice or some co-ordinate force to have aided in the formation of the terraces, a power of excavation would be given to the stream meandering through the excavated valley, which even the attributed aid of tens of thousands of years would wholly fail to confer upon it.

The evidence obtained from the Aurignac cavern, where the skeletons of seventeen individuals were found buried in 1852, together with implements of flint and bone, and bones and teeth of the cave-bear, the cave-lion, wild boar, rhinoceros, and other extinct animals, is thus commented on :—

"Assuming all the conclusions from the observations of M. Lartet to be correct (and from the great majority of them we see no cause to dissent), it appears to be almost incontestable that the result is unfavourable to the idea of assigning an almost measureless antiquity to those numerous deposits which are proved to be coeval with extinct mammalia, and of which we have treated in this article. It goes a long way to convince us that the existence in Europe of the cave-bear, cave-lion, rhinoceros, and mammoth must be approximated much more towards recent times, rather than that the creation of Man must be drawn back into a region of quite hypothetical remoteness, on account of his association with extinct species. But Sir C. Lyell and M. Lartet (who appears to be a thorough disciple of his school) try to persuade us that absence of any mark of important change in the physical condition of the surface of the country about Aurignac is no proof that the antiquity of the tomb may not be indefinitely great. Great no doubt it must be; but every fact connected with its position and discovery seems to show that it belongs to what we may (somewhat vaguely, no doubt) call the *present age of the world*. There is nothing unreasonable in assuming that these mammals survived to a later period of the world's history than geologists have usually allowed. Even the evidence of change of climate which they were once considered to establish has disappeared as a difficulty. In a word, it seems to us to be repugnant to all rules of probable inference to suppose that we have before us intact relics of sepultures which occurred tens of thousands of years ago."

The dates assigned to such deltas as those of the Nile, the Po, and the Ganges afford a curious example of the opposite conclusions at which scientific men of different schools arrive. Dolomieu, Cuvier, and Elie de Beaumont assert that the period at which the Po, the Nile, and the Mississippi began to transgress the natural pre-existing margin of the coast is to be reckoned at a few thousand years only. M. Elie de Beaumont's calculation, corrected by the latest observations of the present rate of deposition, would give a period of growth for the delta of the Mississippi of between 5000 and 6000 years. Sir C. Lyell places it at 100,000!

The reviewer emphatically protests against Sir Charles Lyell's favourite scale of geological time—a specific rate of the elevation of continents, calculated from Sir Charles's observations and study of the rate of rising of the coast lines of Sweden and Norway during the last century and a-half. From this investigation, thus limited both as to time and area, Sir Charles assumes the rise of continents to be at the rate of two and a-half feet in a century, and this he takes as a basis for calculating the age of all marine deposits. He hence concludes that some raised beaches in Sardinia containing pottery are 12,000 years old, and gives an antiquity of 24,000 years to the post-tertiary strata of Norway. To say nothing of the fact that even in Scandinavia itself the elevation is not uniform, for it varies from five feet per century at the North Cape to Zero to the south of Stockholm, whilst in the south of Sweden the land has been sinking for at least 800 years, it is in the highest degree illogical to apply the same chronometric scale to the earth's unknown history—to deduce from 100 years' experience the condition of the globe through all geological time. Yet it is on these principles that Mr. Darwin has ventured to make a calculation of 306,662,400 years! As has been suggested by one of Sir C. Lyell's critics,—"It is pretty much the same as if a man finding that an individual nearly six feet in height had grown only half an inch last year, we were to conclude that he must be 140 years old."

The reviewer prophecies that the discussions now going on as to the antiquity of man will bring to a more distinct issue than hitherto the hypothesis of geological uniformity. For geological changes force is necessary as well as time. In the words of Dr. Whewell, "*Time*, inexhaustible, and ever accumulating his efficacy, can undoubtedly do much for the theorist in Geology; but *Force*, whose limits we cannot measure, and whose nature we cannot fathom, is also a power never to be slighted; and to call in the one to protect us from the other, is equally presumptuous, to whichever of the two our superstition leans." Sir Charles Lyell himself has admitted that rivers such as the Thames "could never, not even in millions of years, have excavated the valleys through which they flow." We may add that there are good reasons for believing that the part of the earth we inhabit has passed through a condition of violent change to one of comparative tranquillity, and that during the periods immediately preceding our own "upheavals, depressions, and fractures of every kind, with concomitant waves of disastrous energy, were more frequent and far more intense than now."

We see that in the Geological Section of the British Association on Monday last Professor Phillips urged on Sir Charles Lyell the probability that the valley of the Somme had been subject to upheaval, and that therefore the question of age could not be determined by calculations founded alone on the excavating force of the river. In fact, he argued from the condition of the gravel-beds, the upper surfaces of which are not level, but vary in slope from two and a-half to one and a-half degrees, that an elevation of the valley must have taken place. In his reply, Sir Charles Lyell acknowledged the possibility of local movements, or even a considerable movement of the country having taken place since the old river flowed. Of course if such agencies be admitted, as we have no data for judging of their extent or effects, it becomes impossible to estimate, by any scale calculated from the present rate of fluviatile deposit, the age of the beds in question.

FROM ABROAD.—IMMUNITY OF NEGROES FROM MALARIAL INFLUENCES—THE DISCUSSION ON VIVISECTIONS AT THE ACADEMY OF MEDICINE—POISONOUS PROPERTIES OF THALLIUM—BACTERIA AS A CAUSE OF PROPAGATION OF DISEASE.

The great immunity of the black races from malarial disease, which has been so frequently demonstrated by the experience of the British army and expeditions of discovery, is undergoing still further illustration in the negro regiments raised by the United States serving in the Southern malarial regions. From the Report of Medical-Inspector Townshend, it appears that in the department of the Gulf, white and coloured troops serving together, and exposed to similar influences, exhibit the following different ratio of sickness. In diarrhœa, dysentery, remittent, intermittent, and typhoid fevers, the sickness amounted to 10·8 per cent. among the white and 0·8 per cent. among the coloured troops.

The two Paris Academies have what we consider a bad habit, however well it may speak for their industry, of continuing their weekly meetings all the year round, without any vacation. Of course their audiences diminish notably in numbers, but there never seems to be much scarcity either of subjects or of speakers; while the Secretaries of our own Societies only know too well the difficulty they have in providing suitable matters for discussion for their much shorter sessions. It is true our neighbours have a wonderful facility of amplification and endurance; and a fact or an opinion, which with us would be stated in a few words, rolls along through period after period with unflagging energy, and no matter how often it may have been enounced or contradicted, it will always find willing and patient auditors, providing its exposition be clothed in elegant language, and assumes an appearance of logical prevision. The Academy of Medicine finds itself almost in the dog days,—a not inopportune time, certainly, in one sense,—engaged in the discussion on vivisections. The Secretary, M. Dubois, opposes the conclusions of the report, as, indeed, he had already done in the committee which delivered it, as insufficient, and as scarcely replying to the questions submitted to the Academy. He proposes the following amendments to the report, with the spirit of which we cordially agree:—"1. The Academy, without dwelling upon the injurious forms which the documents submitted to it upon this subject have assumed, admits that abuses have been introduced into the practice of vivisection. 2. In order to prevent such abuses, the Academy expresses the wish that vivisection should in future be reserved exclusively for the investigation of new facts and the verification of doubtful ones; and that, consequently, they shall be no longer practised in public or private courses of lectures for the demonstration of facts already definitively acquired by science. 3. The Academy also desires that veterinary students should be taught in future the operations upon the carcase, and not be allowed to practise them on living animals." That the scenes described as taking place at Alfort are no exaggeration, may be gathered from a statement made by M. Dubois. "I shall never forget a visit I paid to Alfort. When I entered the theatre I saw a group of pupils practising upon two secured horses all the classical operations, which, sixty-four in number, may, according to M. Renault, be all performed on the same horse without killing him. According to the state of the budget of our school, the Professor added, we perform more or less operations upon the same animal. I murmured the word 'atrocity.' 'Only a necessary atrocity,' replied M. Renault." The Secretary's address has been somewhat coldly received by both the Academy and the Medical press. That of M. Parchappe, who followed him, seasoned with some objurgations on the interference of John Bull in this matter, when he had so much to rectify at home, was more to the taste of the assembly, who received it with rounds of applause. But still, M. Parchappe, able and zealous experimenter as he is, we are glad to find, did not, in the long run, differ materially in his opinions from M. Dubois, inasmuch as he admitted that any but the quite exceptional introduction of vivisections into public courses of lectures constitutes an abuse, and that the practising operations upon living animals was in nowise necessary. But while M. Dubois requires that there shall be some intervention of authority in order to prevent these abuses in future (and who can doubt this with respect to a country where everything, whether good or bad, is a matter of official regulation?) M. Parchappe maintains that public opinion, guided by that of the learned bodies, is amply sufficient in itself to obviate any departure from propriety. Alas! the existence of these abuses, often exposed, now admitted, but scarcely deplored, amply justifies those who regard this view as chimerical.

Two interesting communications have recently been made to the Academy of Sciences. M. Lamy announces that thallium is likely to manifest important therapeutical properties, as he has discovered it to be an active poison. His attention was first directed to the point by the disturbance in his health which he several times encountered while preparing the substance, and which chiefly manifested itself by the production of extraordinary fatigue. Administering small quantities of this substance to dogs, ducks, and fowls, caused their death, the chief symptoms being severe intestinal pain and paralysis of the lower limbs. The presence of this substance in small portions of the organism is very easily detected by means of the spectrum analysis.

M. Davaine says that additional researches have confirmed his statement of the existence of infusoria in the blood of animals suffering from splenic apoplexy. After fourteen rabbits had been inoculated with this blood in a fresh condition, in all bacteria appeared in the blood, and all fourteen died. These *bacteria* are developed in the blood itself, and not in any special organ. They undergo development within a very few hours after their appearance in the blood, their number varying much—a fact which, it has been conjectured, may be somewhat dependent upon the temperature which prevailed at the time of the experiments. After the death of the infected animal the *bacteria* cease to multiply and increase in size, and may undergo transformations; but their vitality is retained in fresh blood, which, dried in the open air, has afterwards been exposed to a temperature of 100° C. The mean duration of life in the inoculated rabbits was forty hours, the shortest period being eighteen, and the longest seventy-seven hours—the older rabbits living longer than the younger. But the longest period any of these inoculated animals lived after the *bacteria* had made their appearance was five hours, giving thirty-five hours for the mean duration of the period of incubation. It was, however, only during the last two hours of its life that the rabbit suffered any apparent inconvenience. At the autopsy, all the organs were found healthy, firm coagulation of the blood in the heart and large vessels being the sole apparent cause of death. *Bacteria* were found in the organs just in proportion to their vascularity, the spleen containing them in prodigious numbers. Next came the liver and kidney, and then the lung. During the period of incubation, before the *bacteria* have made their appearance in the blood, neither these infusoria nor the splenic apoplexy can be propagated by inoculation.

SYPHILIS IN THE ARMY.

(From a Correspondent.)

It is a sign of the growth of our common sense, and a mark of a wholesome change in our way of looking at things, no less than an indication of the magnitude which the evils have attained, that the *Times* of the 19th ult. has had the daring to draw public attention to the amount of preventable disease among our soldiers and sailors at home stations.

The subject is, indeed, a delicate and very disagreeable one to handle, and the article in question evinces singular tact and judgment in the way in which it has stated the scandalous facts which are forcing themselves upon our notice. When between 300 and 400 men out of every 1000 are treated in Hospital for diseases resulting from immorality, and when 503 out of 1000 men invalided at one of our chief naval ports were sufferers from these complaints, the question forces itself upon us—Can nothing be done?

Writing as we do for Medical readers, there is no need for that reticence on our parts which is required at the hands of an ordinary journalist.

Into the religious and moral aspect of the question it is not our purpose to enter. We can quite understand and appreciate the reluctance with which people entertain any plan of legislative enactment, with the view of controlling the spread of these diseases. It would, then, be futile to dwell upon the importance of any sanitary measures directed to the examination and removal of affected women. In large towns, indeed, it would be difficult to carry out efficiently any measures to this end; but it is not so within the limited areas of smaller garrison towns, particularly abroad. The experience obtained in Belgium and elsewhere, of the control and diminution of syphilitic disease by these measures, is quite parallel with our own observations. In Malta and Gibraltar, where measures were stringently enforced, there was almost entire immunity from syphilitic disease amid the troops; and when, as in the former station, these were discontinued, disease became so quickly and widely prevalent as to necessitate a recurrence to them.

Looking to the immense amount of disease and want entailed by these disorders, the great expense incurred by the Government from their widely spread prevalence among troops, and the subsequent loss of health and strength, as well as the congenital or inherited diseases to be traced to their influence, it seems wonderful that so little should be done to prevent their spread, and that the desire should be so determined to ignore their existence.

The number of Hospitals and means in Great Britain for the treatment of so highly contagious a disease is very small and quite inadequate. The *Times* has done well in directing attention to this want. The larger garrison towns and seaports are the main foci of these diseases, and so long as there exist no means for the reception and treatment of persons of both sexes suffering from them, we are neglecting a very obvious way of limiting their ravages. The establishment of such Hospitals—or wards in connection with them—has the decided advantage of applying a measure which will not wound the sensibilities or run counter to the prejudices entertained by the nation against the public recognition of the causes of these evils.

Persons out of the army can form but little idea of the amount of disease and the modifications of health induced by syphilis.

The limits within which any suggestions can be offered are practically narrowed to such as can affect the soldier. Military Hospitals—in Britain, at any rate—would be comparatively empty were it not for diseases of this kind. As at present, the liberty of the subject is carried to its furthest extent, and made to press unfairly upon the more steady soldier. In all benefit clubs, it is a recognised custom that no member shall obtain any advantages for maladies of his own producing and within his own control. In the army, it might surely be regarded as a breach of contract when a soldier escapes his duties by his own immoralities. A soldier whilst in Hospital with such a disease pays no more than another suffering from one the direct result of the execution of his duties. Moreover, for every day so spent, duties are escaped, which fall upon the other and effective men, upon whom therefore, practically, the burden falls. It sometimes happens, also, that a soldier, by means of such a disease, is enabled to escape some punishment awarded to him at a date prior to the appearance of it. These facts seem to carry with them their own remedies.

It would be Utopian to suppose that we shall be able to eradicate evils of this nature by any efforts directed to the education and amusement of the soldier. No doubt we have here done much, and much more remains to be done; but we must not forget that diseases resulting from immoralities are common enough among persons as far removed from the soldier, in these respects, as possible. If not so common, obviously the one class possess means by which they can more easily guard against and escape these evils than the other.

It is well that those who expect so much from the education and elevation of the soldier, should remember that the life of a soldier is altogether peculiar, *e.g.*, he enters the army as a very young man, and is not an old one when he leaves it. During this period of life the passions are not by any means at their weakest. The life of a soldier is a non-natural one of celibacy. It would be incompatible with the nature of his occupation for every soldier to be married, even were it practicable to find sufficient barrack accommodation. Every one will perceive that such a state of things must entail a good deal of immorality.

The married soldiers, however much they may encumber a regiment upon the march, or in barracks, do not swell the list of occupants of military Hospitals and prisons.

A soldier's life contrasts with that of a civilian at the very commencement. The "raw material" of our army is composed in some part of men unfitted for occupations requiring steady habits and perseverance—if not worse; and the discipline of the army exerts a great influence in the removal and repression of much of the crime which would otherwise elsewhere occur. The plan of enlistment is but too often a scandal. The system of barrack life is such that a man is contaminated by the evils around him; it almost necessarily entails a loss of modesty; and individuals obtain that kind of mutual support and sympathy from the conduct of others, to which we can find no parallel in civil life.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

(*From our own Correspondent.*)

NEWCASTLE, Monday, August 31.

It is said of a famous Signora, I believe of Malibran—but in this tempest of pleasure names are not things to be sworn to—that after she had made her sudden rise to fame and wealth, she was so embarrassed with her riches, that she took her golden treasure to her bedside in a punch-bowl, and went to sleep with her hands buried in guineas. For my part I feel equally embarrassed, not with guineas, heaven bless me! but with subjects for this report; for I have not only had my hands, but my very head buried in them all night, and, now that it is morning, find it still difficult to know how to proceed.

Well, to begin, we have down here a goodly number of the Esculapian fraternity,—Professors Owen and Rolleston; Drs. Robinson, E. Smith, Pavy, John Davy, Richardson, Turner, Gibb, Clelland, James Bird, Camps, Haward, Embleton, White, Donkin, Greenhow, Bruce, Falconer, and Heath; and Messrs. Brooke, R. Dunn, R. Clarke, and Nunnerly, not to distinguish others whose names I have not heard.

You will have gathered from the public announcements that the first meeting of the Association took place on Wednesday last. The members met in the new Town Hall in great numbers, so that the Hall was soon filled to excess. The Hall is a fine large building, of what may be called the modern English style (you will understand the definition), and is capable of holding from two to three thousand visitors. It is, however, badly constructed for sound, and, as the time drew on, many fears were expressed that the President's, Sir Wm. Armstrong's, voice would not carry. The fears were disposed of after the first few words of the Presidential address were uttered, for every syllable was clearly distinguishable in all parts. If your readers wish to know the particulars of the address they must read it at length; I dare scarcely give an impression of it lest I should be led astray. "There was nothing new in it" I have heard (a common way of depreciating any good thing without being libellous), and the fact is cynically true; but in truth the address was improved by the actual absence of novelty. Like an Armstrong shell, it was made up of very old material, but the pieces were exquisitely put together, and when it burst there was not a fragment that did not hit somebody's fancy. I met with one man who was hit by seven fragments, and who expressed himself delighted! With all this, Sir William Armstrong is no orator; his voice is thin, and wanting in timbre; he pays little attention to his stops, and he has a mild dialect; so much the better for his address, for it told well, admirably well, in spite of these drawbacks. The last paragraph, for which the speaker, conscious probably of his own want of power as an orator, had reserved himself, came out with peculiar emphasis, and left us all for the moment charmed even with the ring of the words.

I must not trouble you with any lengthy quotations from Sir W. Armstrong's introductory, but there are two passages which will be of peculiar interest to Medical men, and I therefore send them in full.

ON WEIGHTS AND MEASURES.

"Another subject of a social character which demands our consideration is the much-debated question of weights and measures. Whatever difference of opinion there may be as to the comparative merits of decimal and duodecimal division, there can, at all events, be none as to the importance of assimilating the systems of measurement in different countries. Science suffers by the want of uniformity, because valuable observations made in one country are in a great measure lost to another, from the labour required to convert a series of quantities into new denominations. International commerce is also impeded by the same cause, which is productive of constant inconvenience and frequent mistake. It is much to be regretted that two standards of measure so nearly alike as the English yard and the French metre should not be made absolutely identical. The metric system has already been adopted by other nations besides France, and is the only one which has any chance of becoming universal. We in England, therefore, have no alternative but to conform with France, if we desire general uniformity. The change might easily be introduced in scientific literature, and in that case it would probably extend itself by degrees amongst the commercial classes without much legislative pressure. Besides the advantage which would thus be gained in regard to uniformity, I am convinced that the adoption of the decimal division of the French scale would be attended with great convenience both in science and commerce. I can speak from personal experience of the superiority of decimal measurement in all cases where accuracy is required in mechanical construction."

THE DARWINIAN THEORY.

"The science of organic life has of late years been making great and rapid strides, and it is gratifying to observe that researches both in zoology and botany are characterised in the present day by great accuracy and elaboration. Investigations patiently conducted upon true inductive principles cannot fail eventually to elicit the hidden laws which govern the animated world. Neither is there any lack of bold speculation contemporaneously with this painstaking spirit of inquiry. The remarkable work of Mr. Darwin, promulgating the doctrine of natural selection, has produced a profound sensation. The novelty of this ingenious theory, the eminence of its author, and his masterly treatment of the subject, have, perhaps, combined to excite more enthusiasm in its favour than is consistent with that dispassionate spirit which it is so necessary to preserve in the pursuit of truth. Mr. Darwin's views have not passed unchallenged, and the arguments both for and against have been urged with great vigour by the supporters and opponents of the theory. Where good reasons can be shown on both sides of a question, the truth is generally to be found between the two extremes. In the present instance we may without difficulty suppose it to have been part of the great scheme of creation that natural selection should be permitted to determine variations amounting even to specific differences where those differences were matters of degree; but when natural selection is adduced as a cause adequate to explain the production of a new organ not provided for in original creation, the hypothesis must appear, to common apprehensions, to be pushed beyond the limits of reasonable conjecture. The Darwinian theory, when fully enunciated, founds the pedigre of living nature upon the most elementary form of vitalised matter. One step further would carry us back, without greater violence to probability, to inorganic rudiments, and then we should be called upon to recognise in ourselves, and in the exquisite elaborations of the animal and vegetable kingdoms, the ultimate results of mere material forces left free to follow their own unguided tendencies. Surely our minds would in that case be more oppressed with a sense of the miraculous than they now are in attributing the wondrous things around us to the creative hand of a great presiding Intelligence.

"The evidences bearing upon the antiquity of man have been recently produced in a collected and most logically-treated form by Sir Charles Lyell. It seems no longer possible to doubt that the human race has existed on the earth in a barbarian state for a period far exceeding the limit of historical record; but, notwithstanding this great antiquity, the proofs still remain unaltered that man is the latest as well as the noblest work of God."

The Sections opened on Thursday morning at 11 a.m. The Sections are seven in number, with one sub-Section—mark the syllable *sub*—Physiology. The Sections are arranged, and, to use a common expression, "ticketed" in the following order:—

A. Mathematical and Physical.
B. Chemical.
C. Geological.
D. Zoological and Botanical.
D. Sub-Section—Physiology.
E. Geographical and Ethnological.
F. Economical and Statistical.
G. Mechanical.

Of these there are three that will specially interest your readers; I mean the "Physiological," the "Chemical," and the "Economic." Let us take a glance at the Physiological.

Sub-Section D, Physiology, exists, I would first observe, on the food of sufferance. Some years since the elegants amongst the zoologists and botanists bent their not unwilling heads to the proposition that a physiological sub-Section should be formed. It was a shabby permit at the best, and had a cowardly blush. In brief, the zoologists and botanists were anxious to bind to their own most indifferent fascinations the beauty and feminine grace of the Association; they themselves were made, they said, for gardens and for all that was loveliest in nature, and they would have their deserts. They therefore excluded from their debates every paper that might be considered distasteful to their delicate and refined auditory; but as some such excluded papers were of great value, and could not be suppressed, they were sent below to the newly-formed sub-Section D, as to limbo. The idea was startling, and was carried out vigorously; the formation of what was considered "the dirty Section" was accomplished. Poor Physiology!

For a time the plan worked perfectly, so perfectly that the room of sub-Section D resembled Westminster-hall after Noll Cromwell had chalked up, "A Hall to Let." For hours at a time there would be in that room three chairs, four seats, a piece of red cloth, and a decanter, *minus* its attached but unnecessary tumbler; while for the reader of a paper to get, in addition to the chairman and secretaries, an audience of *one* with an ear-trumpet, was considered a decided success. By-and-by, however, things changed; papers, year after year, began to roll in that were of absorbing interest, and soon listeners followed. Not only so, but, as if to show how often selfish rule overrules itself, it is the fact that the very sex that this sub-Section was set up for, that the sex might avoid it, has courted it most, and so rapid has sub-Section D risen in the estimation of the lady members, that Zoology and Botany, the vain and the ambitious dual, have become virtually denuded of crinoline, and have barely enough fulness of skirt to conceal their meagre and rapidly withering proportions. Sic transit gloria mundi.

I have heard many reasons assigned for the crush of ladies to sub-Section D. I have been told that it is all owing to George Lewes' "Popular Physiology" and Dr. Lardner's "Manual." Again, that it is due to the increase of sanitary knowledge, and the desire of ladies really to understand the laws of life; and once more, that it arises from a wide-spreading ambition on their parts to bleed, to dose, and to act, after the pattern set up for them by Dr. Elizabeth Blackwall, and by really charming Miss—I beg her pardon—Dr. Sewell. I am not going to deny that all these agencies are at work, but I must quietly intimate to you that they alone are insufficient to account for the phenomenon. The real causes, as I believe, are the attractions—personal, elocutionary, and social—of the physiologists, who are all young, or, if old, handsome, who speak like Demosthenes without pebbles, and who never quarrel, though they may dispute. This hypothesis is not as yet generally known, but if you, Sir, on a future occasion will kindly fling your editorial eye into the two assemblies, the contrast will convey to you how sound as well as subtle your correspondent is on the point under consideration.

Sub-Section D was opened formally on Thursday, at eleven o'clock. The lecture-room of the Medical school was the place of meeting, and answered well, except that there was a bad supply of fresh air. However, all went on fairly, and there was one peculiar advantage—everybody could hear.

Dr. **Rolleston**, as President, gave the introductory address, and at once was at home with his audience. He spoke first of works on physiology, those that were popular and those that were philosophic. Passing from the general to those of more strictly and severely scientific interest, he observed that a high place was due to the lectures of Professor Huxley on the "Classification of Animals," and it spoke well for the enlightenment of the readers of the *Medical Times* and of the *Lancet*, that the editors of those journals had felt it desirable to cater for their tastes by publishing those lectures on pure science. Turning to works on Experimental Physiology, he was reminded of vivisection—a word which had been rendered familiar to the ears of the public during the last few weeks by the letters and discussions that had appeared in the *Times* and other papers. Addressing himself to one of the questions it suggests, he would ask—Is it possible that a want of humanity is a common fault of physiologists? He was not by any means so sure that "Want of decency is want of sense"—as Pope had said—as that a want of humanity is a want of culture. Badness, ignorance, want of education, were much more surely connected with cruelty than was cowardice. All children pretty nearly were cruel; that is to say, they were capable of performing acts which adults, at least of the upper classes, shrink from. Most, if not all, persons in the lower order of society concerned in the capture of animals, were pretty nearly invariably cruel; and if reproved for cruelty, they would often be unable to understand what was meant. Gamekeepers, again, killed anything which possesses life, unless they knew they could be prosecuted for so doing, or were paid for preserving it. Cruelty, then, usually flowed from want of thought, want of culture, and want of refinement. Was it probable, then, that men of a science demanding much thought, some culture, and not a little education, should resemble persons lacking all these things in the very points most directly characteristic of such deficiencies? Let him state, too, great facts against which no amount of writing or of demonstration could be of any avail, except by ignoring them. The facts were—first, experiments on living animals very frequently cause their death instantaneously; second, when this is not the case, there was chloroform which was almost invariably employed. In vivisection, as it was called, frequently the first step was the destruction of life, and that in a way as speedy, to say the least, as by the ordinary methods of destruction at the command of either the sportsman or the butcher. Now, surely a life might as well be sacrificed for increasing knowledge as for the production of flesh food, or for what was called sport. Experiment, too, was tedious and toilsome, and was therefore rarely undertaken out of wantonness, or for the gratification of malignity. Undertaken for the ends of science, it had as good a claim to our sympathy as the practices of the "gentle craft" of anglers, to say nothing of those of the destroyers of warm-blooded animals. Vegetarians, it was true, but they alone, could meet this argument on principle. But from what he had already seen in Newcastle, he judged that the vegetarian members of this Association were only a small majority of it. (Hear, hear, and a laugh.) In the other case, chloroform obliterated the sense of pain, and only in cases where the question at issue had reference to the nerves was chloroform now omitted to be used. The utility of vivisection had been strikingly proved in two classes of diseases, diabetes and epilepsy. The latter, frightful to witness, was yet more frightful to suffer; violence and danger for the moment, and dreariness of prospect for the future, and of the way to meet it, vivisection had given us at last a hopeful, because a rational, foreshadowing. To diabetes—an equally terrible, if less shocking, malady—the applicability of vivisectional results was even more direct than in reference to epilepsy, thanks to the studies of Dr. Pavy and Dr. M'Donald. He would just say further, that when vivisection was being denounced as causing pain and suffering in a world already so full of both, it would be well to consider that in this question, as well as in all other human questions, we had to deal with complex considerations, and to weigh them one against the other. Absolute certainty was not looked for in morals; absolute demonstration was not given us in religious questions; and absolute freedom of evil was not given to us in any course of practical action we adopt. Vivisection produces a certain amount of pain, but is this pain voluntarily and of deliberate purpose, produced in a few laboratories, greater in amount, in intensity, in duration, than the mental pain, moral distress, and bodily agony endured in many a cottage, many a palace, by the victims of the very two diseases which, in these last years, vivisection has most assisted medicine to combat? He felt it to be his duty to make this apology for vivisection. Having done so, he passed on to the subject of structural anatomy, and specified the names of numerous writers upon it, both English and Continental. He next dwelt upon the Professional and popular advantages of physiological study, and of a biological training, observing that a thorough scientific training tends, necessarily, to engender modesty and distrust of one's self, and, he believed, he had the authority of their own elder Stephenson for saying, that to worldly success there is no gift so necessary as the gift of something quite different. The bar, the senate, and the hustings delight in verbal antithesis, sharp distinctions, and sweeping assertions, which Nature abhors. She knows little of antithesis—she works by gradations; and he who has studied her truthfully knows that the universality of assertion is generally in the inverse ratio of knowledge. (Cheers.) For success, then, in the brilliant lines of life, the study of nature did not constitute the best possible training; but for success in the scientific careers he had specified, it would be wasting words to say how necessary a biological training is. After referring to Baron Liebig's new book, "The Natural History of Husbandry," and expressing the assured conviction that the popular dogmas of Whemley would be shown to be radically false by the advancement of physiological knowledge, he then went on to show that profusion, and not parsimony, was the law of nature, and concluded by saying that many causes could be working together to one result. The incompatibility of two agencies had no truer foundation than could be laid in the arbitrary teaching and unsupported hypothesis of ages skilled in the piecing together of wow-monia, but wholly devoid of scientific method. We have wider knowledge; we ought to have truer philosophy than our forefathers. It would be an anachronism indeed to suffer the figments of the schoolmen to prejudice us against the work of the modern physiologist. (Loud cheers.)

In my next report, which must be too late for this week's number, I will send you a classified account of the whole of the work performed by the Esculapians at the Newcastle meeting, together with a running commentary on all matters of general as apart from Professional interest.

Death of Mr. John W. Davies, of Princes-street Leicester-square.—Many of our readers knew and respected this gentleman, whose death we are sorry to announce. For five-and-twenty years in the service of Mr. Churchill, Mr. Davies was well known to many in the Profession, and all can bear testimony to his obliging manners and businesslike habits. In October, 1860, he left Mr. Churchill, and commenced business on his own account as Medical bookseller and publisher. With small capital, and past the prime of life, he had difficulties to surmount, but the esteem and confidence in which he was held stood him in good stead. He was certainly making way and strengthening his connexion, when he has been called away after a brief three years' struggle. Since May he had been in indifferent health, attributing it to indigestion. It proved, however, to be much more serious, for about a fortnight since he took to his bed, and died on Wednesday morning, at nine o'clock, of disease of the kidneys, in the fifty-fourth year of his age, at his residence at Highgate.

EXAMINATION AT THE END OF THE SUMMER SESSION, 1863, AT THE ARMY MEDICAL SCHOOL, ROYAL VICTORIA HOSPITAL, NETLEY.

A.—WRITTEN EXAMINATION.

I. Military Surgery.—August 1.

Professor THOMAS LONGMORE, Deputy Inspector-General.

1. What are the series of symptoms which may be expected to occur when a lung has been penetrated by a rifle ball? Mention the chief circumstances which may lead to an error in diagnosis as to such an injury having taken place.
2. Name the various kinds of defective vision, independent of those consequent on injury or diseased action, which incapacitate soldiers for the proper use of the rifle. Explain the nature of these defective conditions; show how they are to be distinguished from each other, and state the means of establishing their existence in cases of alleged disability in consequence of them.
3. Describe the systematic inspection of a recruit, and the purpose of each step of the examination. (Three hours allowed for each paper.)

II. Military Medicine.—August 3.

Professor W. C. MACLEAN, M.D., Deputy Inspector-General.

1. Name the endemic diseases of India which chiefly injure the health or destroy the life of the soldiers, giving their classes and order according to the official system of classification, and a summary of the causes supposed to be most active in their production and propagation.
2. What are the chief diseases of the circulatory system observed by you among soldiers, to what causes do you attribute them, and how far do you deem such causes remediable?
3. In a case of supposed acute hepatitis give the diagnostic value
   (*a.*) Of pains.
   (*b.*) Of jaundice.
   (*c.*) Of cough, increased respiration, etc.
   (*d.*) Of enlargement of the liver.

III. Pathology.—August 4.

Professor W. AITKEN, M.D.

1. Define the nomenclature necessary to be attended to in the description of venereal sores.
2. Describe the modes by which elimination of the material in Peyer's patches occur in cases of typhoid fever.
3. State the main points in the phenomena of the typhoid which distinguish a case of this disease from a case of typhus.
4. Enumerate the forms of degeneration which occur in the tissues or organs, and state how the existence of such degenerations may be recognised.

IV. Military Hygiene.—August 5.

Professor E. A. PARKES, M.D., F.R.S.

1. What are the general principles to be attended to in the choice and preparation of sites for barracks?
2. What diseases are supposed to be communicated through the agency of water? How would you examine for organic matter in water?
3. How would you determine the amount and direction of movement of air in a room, and the sufficiency of ventilation?
4. What measures would you adopt if cases of yellow fever were to appear in a barrack in the West Indies?

B.—PRACTICAL EXAMINATION.

I. & II. Military Surgery and Medicine.—August 6.

Examination and concise statement of the history, diagnosis, prognosis, effects of treatment, and influence of the disease or injury on the fitness for military service of a case in the Surgical and one in the Medical division. (Twenty minutes allowed for the examination, and thirty for the written description.)

III. Pathology.

1. Mention the lesions shown in the preparations numbered 1, 2, 3. Describe
   (*a.*) Their nature.
   (*b.*) How they have originated.
   (*c.*) Their probable progress.
   (*d.*) Their probable result.
2. Name the parasites contained in the bottles *a, b, c, d, e.*

3. Describe the lesions shown in the preparation on the two trays before you.
4. Determine the magnifying power of the combination of the lenses of the microscope on the table. (Three hours allowed.)

IV. HYGIENE.

1. Chemical examination of water.
2. Chemical examination of beer.
3. Microscopical examination of adulteration of flour. (Three hours allowed.)

REVIEWS.

A Treatise on Hygiene, with Special Reference to the Military Service. By WILLIAM A. HAMMOND, M.D., Surgeon-General U.S. Army, etc. Philadelphia: Lippincott and Co. 1863.

THE great American civil war, in spite of much misery and desolation which it has necessarily brought on mankind, will at least to some extent redeem its misdeeds if it directs attention and encourages research upon subjects, which through its agency alone could have been brought prominently forward. One of these forms the basis of the present work. Its author, after assigning general reasons for the need of a new work on hygiene, proceeds to say:—"But I had a still stronger motive to actuate me. The nation had entered upon a war for the preservation of its liberties, the most gigantic ever undertaken in the history of the world. Hundreds of thousands, from the boy to the old man, had devoted themselves to the service of their country—men whose value to the State could not be estimated, and upon whom its future greatness, both in war and peace, in a great measure depended. Thousands of Physicians had been found to take the Medical charge of the armies created—many of them well-known for their Professional eminence, and others, by far the greater number, young and inexperienced, though not lacking the will and the ability to do their whole duty when that duty was pointed out to them. Many of these latter have now become fully equal to the laborious service to which they have devoted themselves, and each month adds efficiency and distinction to the Medical corps of the regular and volunteer forces of the army."

He proceeds to mention the curious fact that there is no treatise on hygiene in the English tongue, or at least none competent in size and detail to represent fairly this extensive subject; and he concludes the prefatory remarks by noticing the immense amount of material which has been collected in the Surgeon-General's office during the past year—"An amount unprecedented in the annals of military Medicine and Surgery, and more even than is contained in the published Medical records of all the armies in the world."

After introductory statistics showing the cost of each soldier to the State, the first section of the work opens with the general qualifications and disqualifications of recruits. It objects to too great youth and premature enlistment, recommends a lower standard of height than the five feet five inches of the British army, and in an amusing comparative table shows the numbers of English and French soldiers per 1000 of each size. No less than 583 of the latter, *i.e.*, more than half, fall below the lowest standard of the British army, as given above; whereas 65 Englishmen of the height of 6 feet or above, are only matched by 4 Frenchmen. The tallest man in the table stands at 6 feet 5 inches for England, and 6 feet 4 for France. But the mother country is overtopped in this respect by one of her children in Georgia, who is tabulated at the enormous height of 6 feet 6½ inches. The writer very judiciously comments on this subject, not altogether in favour of the tall men, admitting frankly, among other reasons, that "they afford better marks for the enemy."

Thoracic development gives origin to abundant details as to stethometry and spirometric observations, and is followed by a chapter on special disqualification for military service, which concludes the section.

Part II. begins with race, proceeding on to temperament, idiosyncrasy, age, and sex; these are followed by hereditary tendency and habit, especially referring to nostalgia.

External agents occupy the third division, much space being devoted to the atmosphere physiologically and experimentally considered; temperature, light, electricity, water and its purification, soil, locality, climate "acclimation" and habitations, each form the contents of a chapter, but need no special notice at our hands. The following chapter on Hospitals is one of the best in the book; ground plans and descriptions are given of most large European as well as American institutions. All the older structures "built upon the general principle of the closed court or hollow square," are condemned as unfavourable for light and circulation of air, as well as some, like the Hospital at Netley, of more recent date. The new Hospital of King's College, London, receives severe censure, in which the new wards at Guy's Hospital partake. "It would be difficult," the writer concludes, "to meet with a worse-constructed Hospital in any country than that of King's College." The principles of Hospital construction are next adverted to, both as regards temporary and permanent edifices. A minimum allowance of 1200 cubic feet of space, about eighty-seven of which should be superficial, is allotted to each patient in the latter, and rather less in the former class of buildings.

The Boston Free Hospital, a handsome erection, somewhat like Bethlehem in façade, and the Episcopal Hospital in Philadelphia, receive the author's high commendation; then temporary Hospitals occupy his attention. The magnitude of the struggle now going on in America, and the efforts made by the North, are forcibly brought before us on inspecting the ground plan of these, especially such enormous lath-and-plaster fabrics as the West Philadelphia Hospital. Thirty-four pavilions give accommodation at present to no less than 3124 patients; and yet it seems there is another building at Chestnut-hill of even greater capacity, containing fifty pavilions, radiating from a corridor "of a flattened ellipsoidal form," 2400 feet long.

All the ground plans of these, as well as of the "M'Clellan Hospital" at Philadelphia, and the Hammond Hospital at Point Look-out, seem to present a defect which would render them impracticable in a country where land was valuable; they are spread over an immense extent of ground, in a shape the most irregular and capricious. This is especially to be noticed in the M'Clellan buildings, which much resemble a lobster with outstretched legs and tentacles straggling over the page.

More regular in form, but equally dispendious of space, is the plan of the Lincoln Hospital in Washington City, which accommodates 1200 sick. A long corridor, shaped like a capital V, leads to a double row of twenty-one pavilions arranged *en echelon* along its outer edges. But perhaps the most curious of all is the General Hospital at Fort Schuyler, where the thirty-six pavilions set diagonally round a corridor of sausage-shape, present a close resemblance to the legs of a centipede, or the oars in an ancient trireme. There is probably much truth in the remark of the author, that "the only difficulty connected with plans of this kind for large Hospitals is that of administration. In other respects no serious objection can be urged against them."

Field Hospitals and tents are next considered, then lighting and heating by various processes, as well as ventilation. Camps and their construction are followed by a series of chapters on food and military dietaries examined in a physiological and sanitary point of view. Lastly, clothing, in its hygienic and economical aspects, concludes the work.

It will appear from the above analysis that Dr. Hammond's work contains much original and valuable matter, and that it fully bears out the promise of its title. It is not strictly a treatise on hygiene in its widest acceptation, but rather on military Medical organisation, which may fairly be held to be a branch of that modern and slightly vague department of our art.

It is to be hoped the author may hereafter complete his services to literature by further labours, in which such topics as Medical police, quarantine, drainage, the physical education of soldiers, and the establishment of Lock Hospitals in the vicinity of camps and garrisons, should be fully considered.

We feel sure, from the evidence of the work now before us, that he would bring forward results of large and impartial experience which could not fail to be appreciated by the public.

ENLARGEMENT OF THE HEART IN CHLOROSIS.—Dr. Stark believes that sufficient attention has not been paid to this complication. He adduces four cases in which enlargement of the heart was observed during the progress of the chlorosis, diminishing again as the original disease underwent amendment.—*Archiv. der Heilkunde*, 1863, No. 1.

GENERAL CORRESPONDENCE.

CASE OF DEATH FOLLOWING THE SUBCUTANEOUS INJECTION OF A NÆVUS.

LETTER FROM MR. R. B. CARTER.

[To the Editor of the Medical Times and Gazette.]

SIR,—I am desirous to place on record a case in which the subcutaneous injection of a few drops of a solution of perchloride of iron into a nævus was followed by the immediate death of the patient, an infant 11 weeks old.

Ellen G., at that time aged 4 weeks, first came under my notice seven weeks ago. She was a well-grown and in other respects healthy infant, but the lower half of her nose was a mass of mixed nævus, which involved the columna and both alæ, and enlarged the feature to at least three times its natural size. The disease was apparent at birth only as a small speck, and was rapidly increasing. Its size admitted of great reduction by pressure, but it refilled as soon as the pressure was removed, and, when the child cried, was in imminent danger of bursting. A scratch from the child's own finger-nail had already produced severe hæmorrhage.

The hot needle was freely used a day or two after the child's first visit, chloroform having first been administered. Even with this there was much hæmorrhage from some of the punctures, and, the needle having once entered the nostril, there was free bleeding from the mucous membrane. Collodion was applied to the surface, and the treatment seeming to have checked the growth in some degree, the hot needle was used again much more freely than at first.

The resulting inflammation did not appear to do more than stop the growth of the part actually operated upon, and the disease immediately began to extend upwards so rapidly that in two or three weeks it covered the whole of the nose. The new portion was chiefly subcutaneous, but the skin covering it presented a few red vessels, and was very thin. At the bridge of the nose the diseased mass was not less than an inch and a-half in width. Contractile collodion had been applied regularly, and proved perfectly useless.

The treatment proper to be adopted seemed a question of some difficulty. The infant had been vaccinated on the arm before I saw it. Pressure and ligatures were alike inapplicable; the actual cautery had failed. Superficial cauterisation would have entailed great risk of fatal bleeding on the separation of the eschar. The nutrient arteries were uncertain, and probably numerous. Removal of the growth would have been removal of the whole nose, not to mention the probability of the disease extending backwards. Under these circumstances, deep cauterisation seemed to be the only resource.

The use of caustic pencils pushed into the substance of the growth was contemplated, but decided against on the score of pain; and it was finally determined to inject a solution of perchloride of iron into the mass. This was done, on the 7th instant, without chloroform, to a small portion of the right ala. The pain seemed to be severe, but the effect appeared likely to be useful.

Yesterday morning, the 11th instant, as a preparation for another injection, chloroform was again administered. We did not anticipate any long-continued pain, and therefore did not place the child so fully under the anæsthetic as had been done for the cauterisation. The inhaler being removed, a subcutaneous syringe, containing ten minims of the same solution that was used on the former occasion, was introduced through the sound skin of the cheek just outside the margin of the growth, and carried about to the centre of the latter. The effect of the chloroform had partly subsided, and the child cried out at the puncture. The solution had so far acted on the barrel of the syringe as to impede the working of the piston, which stuck fast, and then yielded with a jerk, expelling five minims of the solution. A discoloured spot immediately appeared on the part of the nævus over the point of the syringe, and the next moment the child gave one shriek, one short convulsive struggle, and ceased to breathe. My partner, Mr. Gregory, who had seen the case from the first, was fortunately present, and we employed artificial respiration, Faradisation, and stimulants, until all hope was over. At the first moment I forced the mouth open and drew the tongue forward, producing a single gasp, and two or three other gasps followed, each more feeble than its predecessor.

In order to see if any similar accident was recorded, I turned to the various books treating of nævus that were then at hand. They were: Wilson on "Diseases of the Skin," Wharton Jones's "Manual of Ophthalmic Surgery," Skey's "Operative Surgery," Fergusson's "Practical Surgery," and Druitt's "Vade-Mecum." The first four authors all mention the treatment by "injection of irritant fluids" among the plans that may be pursued, and give no caution as to any danger attending it. Druitt mentions that the practice has caused death by convulsions, and refers to a case reported in the 21st volume of the *Medical Times and Gazette*. He does not mention the situation of the nævus, nor what fluid was used, and the case appears to be an isolated one. I have not the volume to refer to.

The result of the present case has been in every way so calamitous, so distressing to the parents, and so painful to the Medical attendants, that I hope you will be able to find room for it, as a warning to others how they use what is, I believe, a generally recognised method of treatment.

I am, &c.

Stroud, Gloucestershire, Aug. 12. ROBERT B. CARTER.

MEDICAL NEWS.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, August 27, 1863:—

William Gallimore Hayden, Charing-cross Hospital; James Chapman, Wingham, Kent; Thomas Kelly, Tipton, Staffordshire; Robert Williams, Liverpool; Cuthbert Robert Kendal, Gateshead.

The following gentleman also on the same day passed his First Examination:—

Benjamin Lamb Powne, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BEDDOES, WILLIAM M., M.D., has been elected Physician to the Salop Infirmary, Shrewsbury.

CLAYTON, MARK H., M.R.C.S Eng., has been appointed Surgeon to the Birmingham Blue Coat School.

GELSTON, THOMAS J., M.D. Q.U.I., has been appointed Physician to the Limerick County Infirmary.

HOUNSELL, H. STRANGWAYS, M.D. Aberd., has been appointed Physician to the Torbay Infirmary.

LUCAS, WILLIAM, M.R.C.S. Eng., has been appointed Principal Medical Officer to the Royal Hospital, Chelsea.

MONTGOMERY, ROBERT, M.R.C.S. Eng., has been elected one of the Court of Examiners at Apothecaries' Hall, Ireland.

SYMES, GLASCOTT R., L.K.Q.C.P.I., has been appointed Assistant-Surgeon to Dr. Steeven's Hospital, Dublin.

TYNER, GEORGE ST. G., L.R.C.S.I., has been appointed Resident Surgeon to Dr. Steeven's Hospital, Dublin.

DEATHS.

BROWN, Dr. W. C., at 18, Salutary-place, Exeter, Surgeon H.M. Indian Medical Service, on August 26, aged 44.

FERRIOR, Dr., at Pierson, Pembrokeshire, on August 11, aged 86.

GOULD, WILLIAM, M.R.C.S. Eng., at Fairfield, Manchester, on July 17.

LEVICK, CHRISTOPHER, K., M.R.C.S. Eng., at West Ham, Essex, on August 29, aged 58.

MORSE, JOHN NOURSE, late of Moulmein, East Indies, at 19, Lodowick-terrace, Regent's-park, on August 11, aged 45.

MURRAY, ROBERT, F.R.C S. Edin., at Howe-street, Edinburgh, on August 16.

REYBARD, M., of Lyons, the well-known writer on affections of the urinary organs, has just died after a short illness consequent upon a puncture he received during an operation.

SCARFF, HENRY NORRIS, M.R.C.S. Eng., at Atholl-street, Douglas, Isle of Man, on August 28, aged 47.

WAGSTAFF, ALFRED HENRY, M.R.C.S. Eng., at Leighton-Buzzard, Beds., on July 8.

CONSUMPTION OF SPIRITS AND WINE.—The quantity of home-made spirits retained for consumption as beverage in the United Kingdom in the first half of the year 1863 was 8,946,498 gallons, which is almost precisely the same quantity as in 1862, but 200,000 gallons less than in 1861. There were also 121,958 gallons of methylated spirit. The account of foreign spirits entered for home consumption is made up to the end of the first seven months of the year; the quantity was 2,872,879 gallons,—an increase of above 100,000 gallons over the first seven months of either of the two preceding years; the increase is in brandy. The quantity of foreign wine entered in the seven months was 5,981,612 gallons—an increase of 156,000 gallons over 1862; the increase was in white wine.

PADLEY *v.* COOPER.—NORTHERN CIRCUIT.—LIVERPOOL, AUGUST 28.—This was an action for libel. The plaintiff in this case was a clergyman residing at Dalton, in Lancashire, and the defendant was a Surgeon practising at Ixworth, in Suffolk. The plaintiff had lived for some years with a Captain Baddeley, of Wigston Hall, Leicestershire, an uncle of the defendant, and was on intimate terms with that gentleman. In the month of March last Captain Baddeley died. He left what he had to the plaintiff, but according to his statement it only amounted to about £500. Soon after Captain Baddeley's death the plaintiff heard that a requisition had been signed by defendant and five other nephews of the deceased, requesting that the body might be exhumed, as they were not satisfied with the cause of death assigned, and wished for an inquest to be held, in order that the true cause of death might be ascertained. In consequence of this the coroner sent down a superintendent of police to make inquiries. The plaintiff and his family and servants were examined, as also the Surgeons who attended Captain Baddeley, and other parties in the neighbourhood. The result of the inquiries was that the superintendent reported that there was not the slightest reason for exhuming the body of Captain Baddeley. Some paragraphs which were inserted by the defendant in the local newspapers in reference to Captain Baddeley's death constituted the libels complained of. The case was settled whilst the plaintiff was under examination, by the defendant agreeing to pay £150 to the plaintiff, and tendering him an apology by his counsel.

DR. WALLACE, of Colchester, in a letter to the *Essex Gazette*, stirs up his fellow-townsmen to the importance of doing for the oyster what has already been done so successfully for the salmon; that is to say, devising measures for protecting the ova, and encouraging the growth of the fish. He says:—"I trust before another twenty years have expired, should I be spared to live so long, to see the subjects of ostreiculture, ailanticulture, and the application of town sewage to agricultural purposes thoroughly understood and practically carried out by the good folk of Colchester. I hope to see salmon, silk, oysters, and many other like products, some now unknown, others scarce, made cheap and common results of native industry. By thus multiplying the resources of our country I hope to see more hands employed, the prices of provisions lowered, rates decreased, content, happiness, health more generally diffused. With reference to the application of town sewage to the land, it has recently been pointed out that common earth is at the same time the best deodoriser, while it forms the cheapest and most ready medium by which to restore to the land that which has been taken from it. Ailanticulture, or the cultivation of a silkworm feeding upon the ailanthus tree (specimens of which I recently exhibited at the Town Hall), has been introduced into this country only during the last three years, and into Europe only during the last eight years; but from the experience of these years it is not difficult to foresee a time near at hand when we shall grow silk in abundance in the Southern and Midland Counties of England and Ireland." We heartily wish him the pleasure of seeing a result to which his own exertions in diffusing physiological and natural history knowledge will have greatly contributed.

METHYLATED SPIRIT.—When the legislature decided to permit the use of this spirit duty free in arts and manufactures, that the manufacturer might not be at a disadvantage as compared with the foreigner, it was probably understood that the continuance of this permission must be contingent on the safety of the revenue derived from spirits; and in his report of June, 1863, Mr. Phillips, principal of the laboratory, states to the commissioners that as yet no effort to obtain a potable spirit from methylated alcohol has succeeded. It is true that a patent has lately been granted for a process which professes not only to accomplish this object, but to render wood spirit itself potable, and that, too, at a cost almost nominal; and it is not surprising, says Mr. Phillips, that it has afforded matter for earnest discussion among some of our leading pharmacologists, who, anxious to preserve the integrity of medicinal preparations, have not unreasonably been alarmed by the assertion that wood spirit can be so far defecated as to render it almost indistinguishable from vinous alcohol, and by the exhibition of specimens of such spirit which might be used, instead of spirits of wine for pharmaceutical purposes. But after a series of experiments he has not been able by the process indicated to render either methylated or wood spirit potable; and to render it as palatable as those spirits which have been exhibited it was found necessary to submit it to numerous successive distillations, which, from their costliness, could not be applied profitably on a commercial scale, and even then the products possessed, as did the spirits exhibited, the character of wood spirit, although much subdued, and were in his opinion wholly useless for potable purposes. He expresses a strong conviction, based upon long experience, that the revenue is much less liable to be injured by the abuse of the permission to use duty-free methylated spirit than it is by ordinary illicit distillation. If rendered potable, which he says has not yet been done, it would be much inferior to the spirit produced by ordinary illicit distillation; and if it could be made equal to illicit spirit it would be by more costly apparatus and cumbersome operations more difficult to conceal upon expensive materials. The commissioners state in their report just issued that the attempts which have been made hitherto unsuccessfully to purify methylated spirit so as to render it potable confirm them in the belief that they have nothing to fear on that score.

BIRMINGHAM MEDICAL BENEVOLENT SOCIETY. — ANNUAL MEETING AND DINNER.—Last week the annual meeting, and subsequently the anniversary festival, of the Medical Benevolent Institution was held at the Hen and Chickens Hotel, New-street. Mr. Clayton presided at the meetings, and the other gentlemen present were Messrs. Fayrer (Henley), Shaw (Sutton), Bury (Lozells), Overton (Coventry), Bennett (Droitwich), Baker (Bordesley), Fletcher, Wade, E. W. Blake, F. Elkington, S. W. Williams, Downs (Handsworth), Tarleton (Birmingham-heath), Edwin Sharples (Tamworth), Chesshire, Boddington (Sutton), Swaine, Bartlett (Camden), Burbery, Harmar, Freer, and T. Taylor, Hon. Sec. Letters of apology were read from Sir Charles Hastings, Mr. Bindley, Mr. Berry, Dr. Russell, Mr. Arthur Baker, Mr. J. Pemberton, and Mr. J. J. Schofield. The Hon. Secretary read the report of the directors for last year, and also the following for this year:—"Your directors, in laying before you the forty-first annual report of the Medical Benevolent Society, have much pleasure in drawing your attention to the fact that during the past year five honorary members have been added to your list of subscribers, thus evincing on the part of the public an increasing interest in the welfare of your society. At the same time your directors regret that only three new ordinary members have presented themselves for election. This circumstance will, your directors trust, induce its members to bring before their Professional brethren the great advantages resulting from association with this Society. Your directors deem it necessary to state that in apportioning grants to claimants they do not consider the possession of a moderate income on the part of the claimant any disqualification. There have been during the past year seven recipients on your list—two disabled practitioners, and five widows, with their families. The grants to them collectively have amounted to £211 1s. The number of members reported at the last anniversary was 179; there have been elected since five honorary members and three ordinary members, and two have died, leaving a total of 185 as the present number of members of the Society." The report of the treasurers, which was next read, showed that the total amount received or in hand during the year, inclusive of a balance at the bank at the end of last year of £160 16s. 3d., was £601 4s. 10d.; the expenditure had been £447 8s. 9d., leaving a balance in hand of £153 16s. 1d. The general capital of the Society amounts to £6,828 9s. 8d. The report and treasurers' statement were adopted, and the usual votes of thanks were passed to the president, vice-presidents, treasurers, honorary secretary, and directors. Dr. Russell was appointed president for the ensuing year, and Mr. Bangham, of Ashby-de-la-Zouch, and Mr. J. F. Jones, vice-presidents, and the treasurers and honorary secretary, and the retiring directors (Messrs. Crompton, Evans, and T. Freer) were re-elected. The chair was then taken by Dr. Fletcher, and a vote of thanks was passed to the chairman.—Shortly afterwards the members dined together in an adjoining room, and were catered for with the usual excellence of the Hen and

Chickens. The following subscriptions were announced:—Mr. William Williams, £10; Mr. Henry Williams, £5; Mr. F. I. Welch, (Moseley), £1 1s.; Mr. Joseph Barrows, £1 1s.; Mr. John Barwell, £1 1s.; Mr. Charles Barwell, £1 1s.; Mr. William Barwell, £1 1s.; Mrs. Clayton, £1 1s.; Mr. H. Southall (per Dr. Freeman), £1 1s.—*Birmingham Paper.*

THERE is a very interesting article in the *Dublin Medical Press*, of September 2, on the social changes now at work in Ireland:—"Remarkable as railroads, packets, and telegraphs may be, the change which has taken place in the people consequent on those engines of civilisation—to which may be added the present extended system of education—is still better worthy of study, especially to the Medical man. A mental era, if we may be allowed the expression, has passed over all classes. A great psychological change has been the consequence, perhaps more remarkable in the lower classes than in those of higher birth. Every person has been struck by the extreme love of dress and display which is one of the great characteristics of the present day. So far, indeed, is this carried as to have lately become a serious evil. Girls of ten years old will not attend the national school without their hoops or crinoline, though these are often worn over an empty stomach. The rising generation of young men, the poorest peasant, now dresses in a manner altogether unknown before the use of steam. The lad who labours all the week at his hay-fork, or reaping-hook turns out on Sunday in a style, both regarding cut of coat and necktie, that no gentleman could formerly pretend to, although the material may be different, whilst even the old men have given up the ancient fashion of wearing one great frieze coat over another to keep out the heat. The industrial spirit which now happily pervades the country affords in itself strong evidence of a great psychological change, but on this it is unnecessary to dwell. Generally speaking, the diet of the working classes is much better than formerly, and, what is more important, their endeavours to procure good food, now it has been tasted, keep pace with their improved taste, and they will not be satisfied again to return to their old habits. Tea and bread have in a measure taken the place of potatoes and salt, and we sincerely hope the people will not again relapse into the exclusive use of the dyspeptic potato. . . . But of all the changes which have occurred none equal those connected with the manner, bearing, and what we may call 'the style' of the working people. That cringing manner, which was formerly so characteristic of the Irish peasant, has in a great measure disappeared in those parts of the country most advanced in civilisation, the people in speaking to their superiors in rank and riches being more upright in their carriage and independent in air, whilst compared with the olden time, there is altogether less of taking off or touching of hats, standing bareheaded, addressing the gentry as your 'honour's riverance' (always excepting when the person is looking for out-door relief). In many respects there is still great room for improvement amongst the Irish people. Though their dwellings are improved in a praiseworthy manner, their apartments enlarged and whitewashed, and more light admitted, a greater attention to personal cleanliness is desirable—a fact of which our Dispensary Medical officers are but too well aware; but even in this there is some slight improvement, the young countrywomen beginning to find out that a clean sweet-smelling skin is a good accompaniment to an expanded crinoline and fine ribbons. There seems only one point on which the people of Ireland appear to be unchanged and unchangeable—a persistent desire to get Medical advice for nothing and medicine gratis."

ACCIDENTAL POISONING BY LAUDANUM.—An inquest was held on September 1 at Moxley, near Wolverhampton, on the body of a boy named Vann, aged six years. The evidence showed that the child had been given what was supposed to be a pennyworth of tincture of rhubarb dispensed by Mr. Woolley, a druggist. In about two hours and a-half after the child was put to bed his mother heard a moaning noise, and upon going upstairs found the child lying upon his left side, stiff and insensible, and with his eyes fixed. In about a quarter of an hour he said, "Oh, mamma, I am so giddy, and cannot see you. It is what the man sent that has made me so. Oh, mamma, I shall die; and if I do, you hang that man." He was very drowsy, and gasped for breath, and again said, "Oh, mamma, I thought I was dying then; and if I do, you hang the man." Mr. Woolley was sent for, and, prescribing an emetic, said the vomiting that would follow was to be kept up, and the child prevented from continuing asleep. When he was shown the cup in which the supposed tincture had been served, and told that he had served laudanum instead of tincture of rhubarb, he said he must confess there was a little laudanum in it. The emetic acted, and an officious woman threw away the product. The child grew worse, and at four on Wednesday morning, when the child was dying, Mr. Larkin, Surgeon, of Bilston, applied the tube of the stomach-pump, but the warm water injected returned uncoloured, and in five minutes the child was a corpse. Mr. A. W. Latham made a post-mortem examination of the body. He found very large quantities of blood in the organs of the brain, and the blood generally in a very fluid state. The stomach was empty. There was no trace of poison in it; but all the vital organs of the system were healthy. He was of opinion that death had resulted from some narcotic poison. The child who had been sent for the tincture of rhubarb pointed out the bottle from which she had been served, and said that the medicine had been given her from that bottle only. This bottle proved to be the one in which laudanum had been kept. The coroner, in addressing the jury, remarked upon this part of the evidence in connexion with the admission of Mr. Woolley that there was a little laudanum in the medicine that had been in the cup, and said that if any portion was laudanum it was all laudanum. It was a misfortune that the contents of the stomach before the emetic was administered had not been preserved; nevertheless, such were the evidences on the body that the Surgeon had come to the conclusion that the child had been poisoned. After the jury had deliberated, and the public were re-admitted to the inquest-room, the coroner, addressing Woolley, who had a solicitor with him, said that the jury had found a verdict to the effect that there was no direct evidence to show the cause of the deceased's death. Both the jury and himself felt that the Medical evidence had to some extent failed; but there was no doubt in the minds of the jury, or in his own mind, that this child had died from having had poison administered to him which had been sold by him for tincture of rhubarb. Had the vomit been preseved there would have been no legal doubt in the minds of the jury, and then he would have occupied a different position; but inasmuch as it had been thrown away, and the Medical evidence had in consequence not been of sufficient strength to justify a verdict of manslaughter, a legal doubt had been occasioned, and, acting on his instructions, the jury had given him the benefit of that doubt. The coroner concluded by reprimanding Woolley severely. He stated that from inquiries he had made he found it was not the first time poison had been dispensed by him. We would not say one word to aggravate the remorse which must, we should think, from henceforth cling to the principal actor in this deplorable case. But in the interests of the public we cannot allow it to pass without a word of comment. The druggist not only, according to his own admission, dispensed the poison, but when sent for he appears to have taken upon himself the entire responsibility of the case, to have ordered the emetic, and given directions for the management of the child. Medical aid it seems was not obtained until it was too late. Supposing the report correct, and that no important circumstances are omitted, if ever there were a case in which the powers of the law to deal with illegal practice should be put in force this surely is one.

CHARGE OF POISONING AGAINST A SURGEON'S ASSISTANT.—A Surgeon's assistant, named Augustus Wells, and George Wright, the landlord of a public-house in Hull, are in custody on a charge of administering poison to the illegitimate child of Wright. The following evidence was produced at their first examination:—Mary Ann Woodmancey said she remembered the prisoner Wells coming to her house in January last, and asking her if she could accommodate a young woman who was likely to be confined. On February 11 last the young woman came to the house in a cab, and Wells stayed a short time at the house. In the course of the evening witness was told by the young woman herself that her name was Ann Elizabeth Sherburn. A few days after the child's eyes became sore, and witness asked Wells if he was going to send some medicine to cure them. He had sent a bottle before that, but the child was getting worse. He said, "Yes," and called her out of the bed-room, and, shutting the door, he told her he wanted to speak with her. He then informed her he was going to send a bottle of medicine on the following night by the child's father, and he would give witness 30s. to administer it to the child. She asked him what it was. He did not tell her, but said the child's father was a married man, and it ought to be put out of the way. Witness replied she would not hurt the child for £30. He said he would not stick at 10s. or £1 more, and added that he could get the child buried all right, and could obtain a certificate of its death from the registrar, who was a friend of his. Witness still refused to administer the medicine, and Wells left her without any further conversation on the subject. This conversation took place about one p.m., and about half-past six p.m. the husband of witness returned, and she told him what had occurred. According to his instructions she cautioned the mother. The following evening Wright came. Up to this time Wells had not said who the father of the child was, and witness did not therefore know. Wright went into the bed-room, but did not stay long. After he had departed witness went into the room, and the mother gave her a bottle which she had received from him. (A bottle containing some lotion was here produced, and identified by witness as the same.) The bottle was afterwards locked up by witness's husband, and given to Detective Jones. The day after Wright brought the bottle, Wells called and asked the mother of the child if the father had brought the medicine. She replied in the affirmative. He then turned to witness and asked her if she gave the child its medicine regularly every three hours. She made no reply. About a week after another bottle was brought by Wells. He gave it to witness, and told her to give the child a teaspoonful three times a-day. (Bottle produced and identified by witness) The appearance and smell of its contents were precisely similar to those of the first bottle. Witness did not give the child any of it, but placed it in a closet. The mother left her house on March 30 last, leaving the child in witness's care. On April 8 or 9 the mother came and took the child away. She was in a very excited state, and asked for the bottle. (Witness believed that the mother knew nothing of the second bottle.) Witness refused to give her it, and some words ensued. The mother said if she could get the bottle she would not care. On Friday last witness heard that the child was dead, and she therefore gave information to the police. Mr. Brownridge was next called. He stated that he had examined the two bottles in question, and had found each to contain laudanum and opium. In his opinion one dose would have been sufficient to destroy the life of the child.

BOOKS RECEIVED.

Edinburgh Medical Journal. September, 1863. Edinburgh: Oliver and Boyd.

⁂ Our eye is first attracted by an article on the Maoris by Dr. Tuke. It is exceedingly interesting, and gives a rational view of the present position and a very gloomy one of the future, or no future, of those unfortunate people. A paper by Dr. Matthew Duncan on the Os Uteri in Pregnancy; by Dr. Begbie on Bronchocele and Exophthalmos; by Dr. McNab on Chloroform in Puerperal Convulsions (a rather unpleasantly written and confused affair), and Dr. Fraser's Researches on the Calabar Bean, are the original communications. The Reports of Edinburgh Societies are of great interest.

Edinburgh Veterinary Review. September, 1863. Edinburgh: Maclachlan and Stewart.

⁂ Mr. Gamgee continues his laudable and indefatigable efforts to expose the prevalence of disease in cattle, and the custom of selling the flesh of diseased animals for food.

Pharmaceutical Journal. September, 1863. London: John Churchill and Sons.

⁂ A good number; Mr. Bentley's account of New American Remedies is continued.

The Victoria Magazine. September, 1863. London: E. Faithfull.

⁂ Contains a really instructive essay on Rénan's "Vie de Jesus." The remarks at page 386, though unsuited for quotation in our columns, should be read by all who would know the true spirit in which the New Testament should be studied. The "Journal kept in Egypt" is very interesting, and the "Retrospect of the War" just the pattern of the humanitarian school, who can claim freedom and the sacred right of insurrection for Poles, Hungarians, Hindos, New Zealanders, and South American Republics, but not for the Southern Americans.

The Englishwoman's Journal. September, 1863. London: Kent and Co.

⁂ A readable magazine, containing an article on Dressmakers, and on a new American University for Women, founded by a Mr. Vassar, and others on matters with which women ought to be acquainted.

The Dental Review. September, 1863. London: J. W. Davies.

Rose Bryant: Passages in her Maiden and Married Life. By Emma Marshall. London: Jarrolds, 12, Paternoster-row. Pp. 100.

⁂ An agreeably-written story of the adventures of a girl reared under the most cleanly and admirable Devonshire housewife of a mother. It showeth how she came to visit an aunt at Islington, a grocer's wife, where they supped on lobsters, and never opened the windows, nor said their prayers, nor washed their feet, and where they made the children ill with stifling air and hot buttered muffins. (By the bye, we think the authoress must be wrong in making a grocer's son eat figs before breakfast.) Then in due course follow a fit of the measles and a confinement of the grocer's wife, in which Rose Bryant shows her true Devonshire training, and shines as a nurse. Then she marries, goes to a pokey little house in Bristol, has furious battles with a frowsey mother-in-law and venomous sister-in-law in favour of fresh air, water, and light and the other elements of sanitary welfare; and having got her own way and converted her relatives, they all live healthily and happily to the end of their lives. We present "Rose Bryant" to our own nurse's library, and advise our readers to do likewise.

Report of the Proceedings of a Meeting convened by Dr. S. G. Chuckerbutty for the formation of a Bengal Medical Association. Calcutta. 1863.

⁂ The object of the meeting here reported was the formation of "a Bengal branch of the British Medical Association." Dr Chuckerbutty explained the objects in view, and especially laid stress on the importance of a high tone of Professional honour.

Thirty-third Annual Report of the Belfast District Hospital for the Insane Poor. 1863.

Annual Report of the York Lunatic Asylum. 1863.

⁂ Several of this class of books have already received notices, nor do these materially differ from them. The Belfast report contains interesting matter as to the amusements of patients. It seems that music is extensively cultivated. A band is organised among the males and class-singing among the females. Both sexes are allowed to attend concerts, and even take part in them.

The Thirty-fourth Annual Report of the General Hospital and Dispensary for Sick Children, Manchester. Manchester: T. Fowler and Sons.

⁂ In spite of trade depression in the town, this charity works satisfactorily. A moral is drawn from recent events, which is not without interest. The governors remark that "If most disastrous results have been produced by the present calamity, the knowledge gained during its progress of the condition of the lowest classes of the community—their frequently degraded habits—their ordinary privations—will have interested many who were previously ignorant of these things, and have trained ladies and gentlemen, hitherto holding themselves aloof, to take active measures in the direction aimed at by this and kindred institutions, which will not cease with the present pressure."

NOTES, QUERIES, AND REPLIES.

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He that questioneth much shall learn much.—*Bacon.*

A Subscriber.—The *Medical Times and Gazette* was not published in 1832.

A Domestic Nuisance.—Nemo is thanked for his letter; the same treatment was recommended by our correspondent Oxygen last week.

Dr. Moriarty.—The paragraph sent is doubtless an atrocious puff—but published as it is anonymously in a country paper we cannot take notice of it.

The late Dr. Graves.—The first biographer of Dr. Graves was, we believe, his friend and pupil, Dr. Wilde, of Dublin. The memoir alluded to appeared in Vol. XIX. of the *Dublin University Magazine* for February, 1842.

Attention has been directed by Dr. Septimus Gibbon, in his last Annual Report as Medical Officer of Health for the Holborn District, to the bad effects which result from parents taking their children, when suffering from pneumonia and other grave diseases, as out-patients to Hospitals. The remarks are based on the case of an infant who died of pneumonia in the streets on its return from the Children's Hospital. In a previous report, Dr. Gibbon thought it his duty to bring into public notice the fact that children in the out-patients' room of an Hospital are very apt to contract scarlatina and other contagious maladies. The moral he draws is, that "in the case of all children's ailments, especially those of an acute or contagious character, public charity would be more efficiently dispensed in sending the Doctor to the patient, rather than bringing the little sufferers long distances to the Doctor." No doubt of it, but is Dr. Gibbon's plan practicable? Will the large Hospitals consent to keep a large staff of adequately paid Medical officers, whose duty it shall be to visit the poor at their own homes? and could the smaller Hospitals and Dispensaries afford to do it? The truth is, that the out-patient, like most other mundane systems, has its drawbacks, but the good it does we verily believe outbalances the evil.

The following abridged translation of a letter from M. Alphonse Sax, jun., of Paris, the well-known maker of wind instruments, may be of interest to our readers. It is extracted from the *Englishwoman's Journal* of the current month:—

"I hear it every day repeated—and it seems that Medical men agree on this point with the popular belief—that playing on wind instruments, and especially brass instruments, predisposes to pulmonary phthisis.

"That question, though its importance be a great one, has never, as far as I know, undergone any serious examination; and in this, as in many other things, authors have contented themselves with repeating what they learnt by reading or hearsay. It, however, deserves well to be examined, at a time especially when music is, and happily so, cultivated by all classes of society.

"Son of a wind instrument maker, and myself a maker and player of such instruments, I have been, during the whole course of my life, in constant relation with thousands of artists, who play those instruments, so fatal, people say, to the health; and three only of the artists I have known, died from consumption. Besides, it must be added—for the fact was, in the different cases, proved—these unhappy men were not victims to their calling, but to excesses of all kinds in which they had constantly indulged.

"People who give themselves up to the practice of wind instruments are, in general, remarkable—every one can judge for themselves—by a fully developed chest and a great breadth of shoulders, unmistakable signs of vigour. Who has not seen among strolling players women playing either the horn, the cornet, the trumpet, or even the trombone and ophicleide, and who has not noticed that female musicians enjoy a perfect health, and present a considerable development of the thorax?

"There is a curious remark to be made on this point: in an orchestra, corpulence and vigour are the privilege of those who play wind instruments, whilst debility and thinness are the lot of Paganini's followers. With equal reason can this be said of pianists. Let us mention Listz, Littolf, Flaller, Auguste Dupont, to speak only of a few among the celebrated ones.

"Moreover, if I may be allowed to allude to a personal instance, I will say that we, in my family—eleven children in number—were all condemned by the Medical faculty to die from consumption. The dismal prophecy of the doctors has been fulfilled on eight of us, but the three others, those who from their tender years have blown brass instruments, are actually full of life and vigour, and have all the physical appearances which bode long days to come.

"Artists who play on wind instruments generally enjoy good appetites; their digestion is quick and easy, and they may often be seen, after a copious meal, playing without fatigue or giddiness for four or five consecutive hours. If by any cause they are forced to give up their playing for a certain length of time, they lose their appetite, their stomach grows languid, their digestion difficult, and they no longer enjoy that comfort which results from the regular play of all, and particularly the breathing organs. This I can state from experience.

"In 1847, I had for three months to dispense with my flute and every other wind instrument. I soon, for want of the exercise of the lungs to which I was accustomed, fell ill. When, the acute period of my disease being over, I took again to my wind instrument, my recovery was so rapid that it astonished the learned Dr. Requin, who was then attending me.

"In order that wind instruments should produce the good effect that, in my opinion, is to be expected from them, it is necessary that the professor should teach his pupils how to breathe. Each breath ought to be taken at full lungs; first, because that great quantity of air will allow of a good execution of the musical phrase, and then because it is only by this sort of gymnastic that the breathing organs can acquire tone and vigour.

"The piano, organ, and violin compel the artist to be, so to speak, chest tight, and his nervous contraction when playing is very great. In any musical phrase that requires expression, the artist endeavours to animate with his own life the inanimate instrument he handles; he imparts to it sadness or gaiety, fills it with agitation or delight, identifies himself with it, so that they may be said to live the same life and be one. It is under that condition only that he is truly an artist. But what does it cost him to fulfil that condition? He endeavours to impart his life to his instrument, and you would think this life was really passing away from him, when you observe how uneasy and difficult is his breathing.

"These grave inconveniences for the health do not and cannot exist with those who play wind instruments; for, with them, whatever expression of feeling the musical phrase may require, the action of the lungs is indispensable to produce sounds.

"So convinced am I of the happy results the practice of wind instruments produces on the health, that I should like to see women engage in it.

"The notion of women playing wind instruments, especially brass ones, may seem strange at first. It may be objected that no lady will bear of our system of instrumental hygiene because she will not consent to lose, even momentarily, the grace of her countenance by blowing into an instrument. I do not think the objection a serious one. Besides, since it is not at all necessary to swell one's cheeks as certain musicians do, under the influence of a bad artistic training, I see nothing very ugly in it. The greatest painters, who, by the bye, must have had somewhat pure esthetical notions, feared not in a great number of their immortal compositions to represent their angelic phalanxes with trumpets at their mouths, and those celestial countenances have been in no way spoiled by the manner of representation. Is not Fame pictured with a trumpet to her lips? Are not the maritime deities who surround Amphitrite's car blowing into conches? Are not the cupids who escort the Cytherean queen singing her praises through wind instruments? Do not the beautiful nymphs who follow in the train of the huntress Diana make the hills and vales re-echo the sounds of instruments almost similar to the new ones I have invented?

"The papers say that, in her peregrinations through the East, the Grand-Duchess Constantine visited the Sultan's harem, which at that time contained about two thousand ladies. After having passed through many richly furnished apartments, the princess entered the concert-room, one of true fairy-like magnificence. To her great astonishment, she perceived in the middle of that sanctuary, where men cannot even look, much less be admitted, a body of military musicians dressed in a lovely uniform consisting of a red tunique laced with gold, white trowsers, and a fez with a golden tuft. The surprise of the Grand Duchess ceased when she was informed that this military band was composed of young girls of the harem.

"From the preceding remarks, we may, I think, conclude, that while the practice of string instruments is rather injurious to the health, especially with people who are predisposed to disease of the lungs, the practice of wind instruments is likely to prevent such diseases, or lesson their intensity. In fact, the practice of wind instruments is to the respiratory organs what gymnastics are to the limbs. Why then not treat the first as we do the last, and with more care still, for one may live without arms or legs, but not without lungs? "A. SAX, Junior."

REDUCTION OF THE EMOLUMENT OF ARMY MEDICAL OFFICERS IN CHARGE OF CIVIL STATIONS IN INDIA.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Your constant advocacy of justice for the Army Medical Department has induced me to bring to your notice a further act of injustice which has been lately perpetrated by the Government of Bengal. Army Medical officers appointed to the charge of civil stations have until lately invariably drawn 12 rupees 8 annas (£1 5s.) a-month as "head money" for every 100 men in the police corps which were under their Medical charge. During the past few months these corps have been reorganised and amalgamated into one general police force, and, although under the old system they were called "police battalions," and under the new "Bengal Police," yet the Medical officers in charge, who have as much work and responsibility as formerly, have been refused even this small allowance. When the rules for this new police force were first promulgated they contained a clause granting Medical officers a consolidated allowance of 50 rupees a-month in lieu of head money. This, however, has been cancelled, and we are compelled to submit to this grievous oppression, although the finances of the country are so flourishing that a small reduction of income-tax has been made. I am, &c.

Bengal, July, 1863. ONE OF THE SUFFERERS.

P.S.—The force at present receiving my gratuitous services is upwards of 500 strong, and recruiting is still going on.

COMMUNICATIONS have been received from—

Dr. HAYDEN; Mr. F. D. FLETCHER; Dr. E. HAMILTON; Mr. R. MACNAMARA; Dr. LEDWICH; Dr. GORDON; Dr. ANDERSON; Mr. ROBERTSON; Mr. C. C. ATKINSON; Mr. T. UNDERWOOD; Mr. G. G. GASCOYEN; Mr. G. SOUTHAM; Dr. R. G. HARDWICK; Mr. LUTHER HOLDEN; Dr. N. PARKER; Mr. WHITFIELD; Mr. STOCKER; Mr. POLLOCK; APOTHECARIES' HALL; Dr. HUMPHRY; ROYAL COLLEGE OF SURGEONS, IRELAND; Mr. W. H. COATES; Dr. R. M'DONNELL; The Rev. R. OULTON, A.B.; Mr. W. LUPTON, M.A.; Dr. F. R. CRUISE; Mr. J. McBEAN; Dr. EMBLETON; Mr. J. W. CUNNINGHAM; Dr. S. MACADAM; Mr. JAMES SHAW; Mr. B. W. RICHARDSON; Dr. W. ABBOTTS SMITH; ONE OF THE SUFFERERS; THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION; Dr. HUMPHRY; Dr. GIBBON; Dr. ROBERT FOWLER; NEMO; Mr. J. SWINSON; Dr. R. HALDANE; Dr. J. C. LORY MARSH.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 29, 1863.

BIRTHS.

Births of Boys, 865; Girls, 840; Total, 1705.
Average of 10 corresponding weeks, 1853-62, 1689·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	667	667	1334
Average of the ten years 1853-62	614·6	597·2	1211·8
Average corrected to increased population..	..	..	1191
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	4	1	8	..	4	8	19
North ..	618,210	8	3	32	4	6	12	39
Central ..	378,058	4	2	21	1	4	9	22
East	571,158	9	3	39	5	5	12	41
South ..	773,175	6	2	27	4	10	8	60
Total.. ..	2,803,989	31	11	127	14	29	49	181

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·521 in.
Mean temperature	60·0°
Highest point of thermometer	74·6
Lowest point of thermometer	50·3
Mean dew-point temperature	52·6
General direction of wind	S.W.
Whole amount of rain in the week	1·21 in.

APPOINTMENTS FOR THE WEEK.

September 5. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

7. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

8. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

9. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

10. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

11. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

LECTURES
ON
THE BLOOD, LYMPH, AND CHYLE OF VERTEBRATA,

DELIVERED AT
The Royal College of Surgeons of England,
DURING THE SESSION OF 1863.

By GEORGE GULLIVER, F.R.S.,
Professor of Comparative Anatomy and Physiology to that College, and late Surgeon in the Royal Regiment of Horse Guards.

Lecture I.—*On the Buffy Coat of the Blood—Historical Notices—Lentor—Tenuity—Excess of Fibrin—Retarded Coagulation.*

In the last course of Lectures we gave accounts severally of the blood corpuscles and liquor sanguinis, and now propose to consider them relatively and collectively in connexion with the formation of the buffy coat of the blood.

Historical Notices.—Though the buffy coat might seem rather to belong to pathology than physiology, it occupies the neutral ground between them; for if a diseased state in man, it is the natural or healthy condition in certain Apyrenæmata, as the horse, and in women during part of the time of pregnancy. And, truly, there is scarcely a more curious and interesting little episode in medical science than the history of this buffy coat. It was to observations on it, in 1760, by Richard Davies that we were indebted for a revival in this country of a correct knowledge of the constitution of the blood, the discovery of which has so often and absurdly been since claimed by and for others, up to the time of the publication of Müller's "Physiology" and the Hunterian Professor's Preface to the fourth volume of the last edition of John Hunter's works.

There are or have been five leading opinions as to the state of the blood during inflammation, to wit—1. That there is a lentor, thickening, or viscidity of the blood. 2. That, on the contrary, the blood is thinner or more fluid than natural. 3. That there is an increased proportion of fibrin and a diminished proportion of red corpuscles; or that the fibrin is diminished at the expense of the red corpuscles. 4. That there is a slower coagulation of the blood. 5. That in buffy blood the corpuscles clump together, and thus separate either laterally or by sinking, or both, from the liquor sanguinis.

All these conditions, except the attenuation of the liquor sanguinis, often exist together in blood about to become buffy. But we will give a successive sketch of the five several opinions (so intimately connected with the doctrines of inflammation), examining them as we go along, and putting them when needful to such experimental question as may seem best calculated to enable us to estimate their respective merits. Each of the states just mentioned has been at one time or other assigned as the proximate cause of the buffy coat, and other causes belonging more especially to pathology are foreign to the present purpose. Yet I am much mistaken if, when we have clearly realised the physiological facts relating to the immediate cause of the formation of the buffy coat, we shall not be in a good position to work out the subject, whenever we may choose to do so, in connection with disease and the practice of our Profession.

Let us, however, pause for a moment to consider who first recognised in Britain that this buffy coat is really one of the parts belonging naturally to the blood. As an old military surgeon, it is pleasant for me to observe that we owe this to Sir John Pringle, who distinctly mentioned the fact in a note to a paper read before the Royal Society in 1752, and cited in his book on the "Diseases of the Army." Our northern friends, too, will be pleased to remember that he was a Roxburghshire man, just as they may well be proud when thinking of John Hunter as a native of Lanark. Pringle was Physician-in-chief and Hunter Surgeon-General to the Army at times when such offices were adorned by the possessors.

To our apprehension it may appear a very obvious and simple fact, this buffy coat being merely the spontaneously coagulable matter of the blood. But before and after Pringle's time there was such a darkness on this subject in Britain, that the buffy coat was either considered as a new formation in disease, as a changed state of the serum, or as a metamorphosis of the red corpuscles; while the cause of the coagulation of the blood was regarded as a mere clotting or running together of the red corpuscles, and the agency of the fibrin was forgotten or unknown. Pringle seems to have arrived at a knowledge of the true nature of the buffy coat, rather by a natural perspicacity enabling him to see the matter correctly, with the light, perhaps, of some of Senac's observations, than by any experimental research.

Lentor.—The doctrine of lentor of the blood prevailed for the greater part of a century, and has never, I believe, been fairly refuted by experiment as far as regards inflammatory blood. The viscidity of this blood and of that occurring in febrile diseases was chiefly supported on the Continent by Boerhaeve, Van Swietan, and Marherr; and in Britain by Dr. Francis Home and Huxham; but at that time, as we have just mentioned, with an ignorance of the coagulable principle of the blood. Afterwards, with a correct knowledge of the different parts of the blood, Mr. Hey and Mr. Grainger maintained that it is not attenuated during inflammation; and Professor Henle and Mr. Wharton Jones stated that the liquor sanguinis is then really thickened; and I believe that Professor Hermann Nasse also entertained this view.

I endeavoured to find out experimentally whether the formation of the buffy coat would or would not be favoured by artificially increasing the viscosity or spissitude of the liquor sanguinis; when it appeared that the sinking of the red corpuscles was accelerated by adding mucilage with a very small proportion of salt, and retarded by the addition alone of a weak saline solution to the blood, and that this quickened sinking was caused by an increased aggregation of the corpuscles, and the slower sinking by the separation of the corpuscles. Thus the results were more favourable to the old doctrine of lentor than to the newer one of tenuity. Recently, some good observations on the attraction and adhesion of the red corpuscles have been made by Mr. Richard Norris, of Birmingham, from which he also infers that this aggregation of them is influenced by the condition of their surrounding medium.

Tenuity.—After the doctrine of lentor had long been a favourite, it was, like other favourites, suspected and opposed. Then arose the contrary view of attenuation or increased fluidity. And by this specious view the formation of the buffy coat was supposed to be very easily explicable. The red corpuscles would, of course, *cæteris paribus*, sink more rapidly in proportion to the thinness of the fluid in which they exist. But this increased tenuity must not be confounded with diminished specific gravity, because it was known, as will be presently explained, that it could not be to the specific lightness of the liquor sanguinis that the more rapid sinking of the corpuscles was owing; and the difference is an important one, the ignorance of or confusion about which has led to much nonsense and error in some compilations.

Now, a mixture of fibrin and serum, such as the liquor sanguinis, was known to be specifically heavier than the serum without the fibrin. When, then, the red corpuscles were seen to sink so rapidly in the liquor sanguinis, no wonder that this was supposed to be attenuated; and the conclusion became irresistible after Hewson discovered that these corpuscles will sink more quickly through the liquor sanguinis than they will through the serum alone; for certain it is, as was then known, that the specific gravity of the serum is lowest. Thus, while no allowance whatever was made for any difference in the state of the corpuscles in the two fluids, the supposed increase of tenuity in the liquor sanguinis only remained to account for the acceleration in the sinking of those corpuscles. It was urged that the corpuscles are alike, part and parcel of the very same lot, just as if so many lead-shot or grains of sand only were the subjects of experiment. And so the accuracy of the doctrine of tenuity was long supposed to be completely demonstrated, and often cited as one of the wonders of the blood; the serum at once thinner and more subtle when mixed or combined with a grosser and heavier substance! As if there were any need of heaping marvels on the inspired declaration of the Pentateuch, and the facts and inductions of Harvey in support of that declaration.

This doctrine of tenuity was announced about the same time in England and on the Continent by Dr. Richard Davies and by Quesnay, and was afterwards entertained in Britain by Dr. Hunter, Cullen, Mr. James Wilson, and Dr. Davy, but more especially by Hewson, who almost made the subject his own by the ingenious and original manner in which he subjected it to experiment. And even now this incorrect view of tenuity is taught by Professor Virchow, as appears by the following declaration in the late English version of his work,—"You all know that the ordinary crusta phlogistica forms in the blood of pneumonia or pleurisy the more readily the greater the wateriness of the liquor sanguinis"!

But though Hewson's curious discovery of the more rapid sinking of the red corpuscles of buffy blood in the liquor sanguinis than in the serum alone is undoubtedly correct, as I have often proved experimentally, there was an error in his inference from his own true premises. And this error arose from his false antecedent conclusion, that the red corpuscles, by their rate of sinking, must afford a true measure either of the tenuity or specific gravity of the fluid containing them, as if the corpuscles were only a set of glass beads, whereas there are few, if any, organic particles that can be relied on for this purpose, and least of all the red corpuscles of the blood. In fact, as Hewson had himself discovered, long before anything had been heard of endosmosis, they are delicate endosmometers, swelling or contracting with currents inwards and outwards, according to the relative density of the containing and contained fluids; while either the aggregation or dispersion of the corpuscles would greatly affect their rate of sinking, just as the fine particles of a mineral powder would remain suspended in water long after the coarser lumps had sunk to the bottom. And any attraction, as before mentioned, between the corpuscles themselves, inclining them to run together into clumps, would hasten their separation from the liquor sanguinis laterally as well as downwards, which is exactly what is now known to be the fact during the formation of the buffy coat.

But, admitting the exactness of these adverse facts, experimental proof was wanting to show their real value in the question, and I accordingly undertook the inquiry, in which numerous experiments were made by artificially thinning and thickening the liquor sanguinis (*Edin. Med. and Surg. Journ.*, vol. 64; and Notes to the Syd. Soc. ed. of Hewson's Works). The results were quite conclusive against the doctrine of tenuity. The formation of the buffy coat was always either prevented or lessened by making the blood thinner and specifically lighter by weak saline solutions, while the sinking of the corpuscles was accelerated by adding mucilage to other portions of the same blood. And the very same effects were observed in serum,—that is to say, the corpuscles sunk more rapidly in this fluid when it was made thicker by mucilage than when it was made thinner by dilute saline solutions. Lastly, I discovered that while pure blood is becoming buffy the corpuscles sink in it more slowly during the first few minutes than afterwards (as shown in the Diagrams); and so, were this rate of sinking a true indication of the consistency of the liquor sanguinis, it must become thinner in passing from a fluid to the solid state, contrary to the well-known fact. And so we dismiss this pretty favourite doctrine of tenuity.

Excess of Fibrin.—The opinion that the proportion of fibrin is increased at the expense of the red corpuscles in buffy blood is a very old one. It was adopted more or less by Sydenham, Quesnay, Gaubius, Bordenave, and Mr. Hey, and since confirmed by Mr. Thackrah. The older writers, particularly Quesnay, often ascribe the increase of the fibrin to the action of the arteries reducing the red corpuscles to a gluten, humor, or glaire, all of which terms were then in use for the spontaneously coagulable matter of the blood. And Mr. Wharton Jones and Dr. Simon adopted the opinion that the red corpuscles are more quickly turned into fibrin during inflammation than in health. But, independently of this hypothesis, certain it is that in buffy blood there is usually an increase of the proportion of fibrin in relation to the red corpuscles; in other words, there is either an absolute increase of the fibrin, the quantity of corpuscles remaining the same, or an absolute diminution of the corpuscles while the quantity of the fibrin remains unaltered. To this effect the numerous observations of Andral, Gavarret, Delafond, and others, are so conclusive, that it is now generally adopted, and, I believe, has never been well disputed against since the original observations of our countrymen, Hey and Thackrah.

Retarded Coagulation.—We come now to the fourth head, to wit, that the buffy coat is owing to retarded coagulation of the blood. This doctrine has been more generally and speciously held than any of the others. And no wonder, when the buffy coat could be produced at will by keeping the blood fluid for a longer time than natural by a mixture with it of neutral salts, and by other means proved by Dr. Babington; and the evidence seemed quite conclusive when it had been observed that buffy blood takes more time to coagulate than healthy blood, or that the coagulation is slower during the formation of the buffy coat than when there is to be no buff, and that when coagulation is unusually quickened in blood that would otherwise certainly be buffy there will be no buff at all. Accordingly, we find that such physiologists as Dr. George Fordyce, Mr. Hunter, Dr. Babington, and many others, adopted this conclusion. But it was opposed by Hewson, Dr. Stoker, and Dr. Davy, who, if they substituted nothing better, clearly destroyed the very foundation of this hypothesis, or, at least, adduced facts which have always appeared to me sufficient proof that, however retarded coagulation may be an incidental or minor factor, it is not the essential or fundamental cause of the formation of the buffy coat,—by no means what Coleridge would call the central phenomenon. Yet (in connexion with some false observations or inferences on bradyfibrin or fibriogenous substance) this doctrine, that slow coagulation is essentially requisite for the production of the buffy coat, is still taught, especially by Virchow, and unconditionally accepted in the English version of his work, though long before proved in this country to be erroneous (*Edin. Med. and Surg. Journ.*, lxiv., 360; and Note xxi. to Hewson's works).

Besides the observations of Hewson, Stoker, and Davy, just mentioned, my own experiments, which have been very numerous on this point, clearly proved that slow coagulation, so far from being the cause, is rather only an effect of that condition of the blood on which the formation of the buffy coat depends. It is quite true, as so well shown in the experiments of Dr. Babington, that the red corpuscles, being the heaviest part of the blood, will sink more or less in the liquor sanguinis, whenever it is kept by artificial means so long and sufficiently fluid as to allow them to fall down. But in the human subject, so rapid is the separation of the red corpuscles sometimes from the liquor sanguinis, that a thin colourless supernatant layer of it occurs in about a minute, which is long before coagulation commences in healthy human blood. And in the naturally buffy blood of the horse a separate top stratum of liquor sanguinis—the still fluid buffy coat—commonly appears within two and regularly in less than three minutes (as shown in the Diagrams).

Here, then, is a buffy coat formed, though not so thick as it afterwards becomes, and that not exceptionally, but according to rule, before there has been time for slow coagulation. Nothing therefore can be clearer than that the buffy coat in these cases is not caused by retarded coagulation. And had former observers and experimenters attended to the blood of the horse, the error, instead of prevailing for the greater part of a century, could scarcely have existed a week; while the few recorded cases of quick formation of the buffy coat in human blood would not have been looked upon with suspicion, or as "mere peculiarities occurring in certain cases, particularly erysipelas." Indeed, one of the earliest and most impressive facts to my mind on joining a cavalry regiment, was the instant and decisive evidence I saw that a buffy coat was separated in the blood of the horse, though still fluid and transparent, long before time had elapsed for retarded coagulation. And so all the doctrine on this subject of Mr. Hunter's great work on the blood, and Mr. Abernethy's eloquent teaching accordingly, in the faith of which we had securely reposed for years, was wiped out in a few days, and by such mere commonplace observation as was and is within the compass of any farrier.

But this soon led to a nicer experimental inquiry (*Edin. Med. and Surg. Jour.* v., 64, and Notes to Hewson's Works). While it was so well-known that the coagulation of human buffy blood was commonly slower than the coagulation of healthy blood, it had also been observed that coagulation might be retarded for at least twenty minutes, and yet lead to the formation of no buffy coat whatever. Dr. Stoker, especially, had given clear cases of this kind; hence it occurred to me to see how the corpuscles would sink in horse's blood when its coagulation was artificially retarded by means which also at the same time made that blood thinner and specifically lighter. For this purpose urine and saline solutions were used; and the result was that, in every trial, although coagulation was much retarded, there was either a diminution of the buffy coat, or it was never formed at all, each of the vases of blood so thinned and diluted affording a most striking contrast with the vases of pure blood and of blood artificially thickened set side by side with the others of thinned blood for comparison. These experiments were equally adverse to the doctrine of tenuity as the cause of the formation of the buffy coat.

Thus we have clearly proved that retarded coagulation is not the essential efficient in the formation of the buffy coat. Let us next inquire whether this slow coagulation may not rather be an effect than a cause of that condition of the blood on which the formation of the buffy coat depends. In all my experiments it was shown,—1. That the coagulation of liquor sanguinis is slower apart from than when mixed with the corpuscles; 2. That coagulation is much accelerated whenever the proportion of fibrin of the blood is diminished by the addition of red corpuscles; 3. That the addition of serum alone to the blood but very slightly accelerates coagulation, and pure water in the same proportion has little or no effect. Now, it has already been shown that, regularly, the proportion of fibrin relatively to the red corpuscles is increased in buffy blood, which coagulates more slowly than blood not buffy. And it as plainly results from those experiments that when the proportion of corpuscles is artificially increased the coagulation of the blood is signally hastened. Have we not, therefore, fairly inferred that the slow coagulation of buffy blood, so far from being the cause, is really an effect of that condition of the blood on which the formation of the buffy coat depends? This condition, then, is chiefly a diminution of the proportion of red corpuscles, and their rapid separation from the fibrin; in other words, an increase of the proportion of fibrin relatively to those corpuscles, and the quick divorce between these two parts of the blood. And this subject, with the collateral facts, will be fully explained in the next Lecture, which will conclude the account of buffy blood.

STAPHYLOMA OF THE CORNEA AND OF THE SCLEROTICA.

GENERAL ENLARGEMENT OF THE EYE-BALL WITH DISORGANISATION. TREATMENT.

BEING SELECTIONS FROM A COURSE OF LECTURES ON DISEASES OF THE EYE.

By HAYNES WALTON,

Surgeon to the Central London Ophthalmic Hospital, and to St. Mary's Hospital; late Teacher of Anatomy and Demonstrator of the Surgical Operations in St. Mary's Medical School.

After an eye has been spoiled for all practical purposes, it may be the source of extreme unsightliness, positive uneasiness, or actual pain. It may even be a cause of damage to its fellow. Staphyloma and disorganisation of the eye-ball give these results. I propose to examine the several physical conditions so concerned, also the morbid anatomy of the diseases, and to add the treatment.

For the existence of a staphyloma of the cornea, there must of necessity be more or less destruction of the cornea by ulceration, or sloughing, or a wound, by which the iris is exposed or protruded. The natural process of repair which succeeds constitutes a staphyloma; that is, a protruding, opaque, slate-coloured tumour is formed in this way. The exposed iris becomes covered by an opaque, firm tissue, the same as that of a cicatrix, which, in the case of a partial staphyloma, is incorporated at the base with the cornea, and in that of a total or complete staphyloma with the sclerotica and whatever might remain of the cornea. A staphyloma therefore always is cicatrix lined by iris, and not, as is generally supposed, mere bulging of the cornea. The new material examined microscopically is made up in front of a thick coat of epithelium of several layers of cells, and posteriorly of white and yellow fibrous tissue intermingled with imperfectly-developed nuclei. In consequence of pressure posteriorly, the new material grows and expands.

Several forms of staphyloma corneæ have been described by writers, and you may find particularly specified the globular and the conical, and besides these there is mentioned the term staphyloma racemosum, when there are several projections, from their supposed resemblance to a bunch of black currants. The various colours also of staphylomata have been tediously detailed, but without any practical advantage, and to the confusion of the subject.

The unpleasant results of staphyloma are not always in proportion to the bulk, for some run their course, attain a great size, and burst, as large thin ones are apt to do, without scarcely occasioning any uneasiness.

Staphyloma of the cornea may call for removal on the score of mere deformity, and what is there about the eye that can spoil the countenance more. A very staring defect may often be most materially lessened, and not unfrequently advantageously exchanged for an artificial eye.

The pain of a staphyloma may necessitate an operation, but the most serious call for the reduction of the tumour is when it affects the other eye sympathetically, producing sympathetic inflammation of the eye-ball. Such an effect is more commonly seen when there is staphyloma of the sclerotic coat as well; and still more often when there is general enlargement of the eye-ball.

There are occasionally changes in the crystalline lens accompanying the staphylomatous state, whereby it is ossified or becomes cretaceous; and although it is not possible to know when it is so altered, or to be able to refer with precision any set of symptoms to either of those conditions, proof is not wanting of their occasionally producing prejudicial effects by irritation.

When staphyloma of the cornea demands attention from the deformity, from irritation, or from sympathetic influence on the other eye, the whole of it should be removed by "abscission."

Unless all be taken away, there is a chance of reproduction to a greater or lesser degree. This is particularly likely in the thick, small, and conical form, when only a slice is excised; but only the true staphylomatous portion should be cut off, and every part of the corneal structure that is sound should be saved. Where the entire cornea has been lost, the excision should still, as a rule, be in front of the sclerotica, because there will be less bleeding, the proceeding less severe, and the form of the eye is more likely to be preserved, although in so aggravated a case complete collapse is imminent.

The operation is best performed in this manner. The eyelids having been retracted, I transfix the staphyloma with a cataract needle, the curette, or better still, an ordinary tenaculum, and cut it off with a long and narrow scalpel gently and rapidly. It may be requisite to make the amputation a little behind the cornea, and then the iris, or whatever remains of it, is excised. Should the lens be present, whether opaque or not, it should be removed. If the vitreous humour be healthy, I try to prevent its escape by gentle manipulation and rapid closure of the eyelids; and sometimes none of it is lost. What should follow is very important. There is no more necessary step in the whole proceeding, and without it there may be copious bleeding and suppuration in the stump. I place a roll of cotton wool, or what is next best, a pledget of lint, quickly on the closed eyelids, maintain it with a bandage, and keep it there for two or three days, and afterwards apply straps of plaster. Healing is effected by the cicatrising of the cut surface, and its rapidity depends on the healthiness of the vitreous humour. It is not unusual to find the parts sealed up in a week.

The more the eye is diseased the quicker and the more copious is the bleeding. It does not occur except the interior is unhealthy, having been damaged by inflammation. It is this tendency to hæmorrhage that has induced some Surgeons to speak disparagingly of this procedure, and to recommend instead extirpation of the eye-ball; but it is an operation far better adapted to the vast majority of these cases. Both are valuable, and the greatest benefits are conferred when each is assigned to its proper place.

When the bleeding is from the vessels in front of the eye that have been cut through in the operation, it can easily be restrained, and is never of any consequence. When it is internal, it may for the most part be stopped by the compress. I have long been convinced that the source of this internal or intra-ocular hæmorrhage is not the central artery of the retina, as generally supposed, but the choroid; and my opinion has been publicly stated for years. There is always a previous escape of the unhealthy vitreous humour, and the removal of pressure or support from the diseased choroidal vessels causes rupture of them. I have seen the whole of the vitreous humour thrust out by clots, the retina hanging in shreds in the wound.

The operation once well performed suffices. Some exuberant granulations may arise, but they are of no consequence; for if they do not decline of themselves, the use of an astringent lotion, or the application of a mild escharotic, as the red oxide of mercury, will reduce them.

I advocate early operating, because the general tendency of the disease is to increase; and the smaller the tumour that is removed, the more is the form of the eye preserved.

Staphyloma of the sclerotica differs materially from that of the cornea. It is distension of the sclerotica into a dark-blue or blackish tumour. The usual seat of enlargement is at a little distance around the cornea, nearly in correspondence with the circumference of the posterior chamber, and this is spoken of as "staphyloma corporis ciliaris." The colour of the projection renders it very conspicuous. Unlike staphyloma of the cornea, several tumours generally exist; the cause also and mode of production are wholly different. Inflammation is developed in the interior of the eye-ball, the choroid being supposed to be usually its primary seat. It is more frequently slowly and insidiously developed than actively. Ultimately the sclerotica is involved in the morbid action, which destroys its intimate structure, and it becomes adherent to the choroid. Preternatural vascularity of this coat is one of the changes attendant on the process, and the large vessels are persistent. With much bulging of the sclerotica vision is, I believe, always lost. I never met with a case in which it was not. The general invasion of disease destroys the eye, the cornea being the tunic that suffers the least. The fact of the staphylomata being so commonly in correspondence with the position of the posterior chamber, has induced some pathologists to attribute their formation to an undue secretion of the aqueous humour, but the theory is not tenable.

Whatever be the call for treatment, whether pain from distension, irritation, deformity, or sympathetic influence, the course is, when practicable, to reduce the size of the eye-ball, by letting out some of its contents, and to effect it with the least possible sacrifice of the ocular coats; for although the stump which is left never equals that which follows the removal of a staphyloma corneæ, still a sort of button may be preserved for the adaptation of an artificial eye.

It must be left to the judgment of the Surgeon to determine, according to the severity of the case, whether this should be done by removing the cornea, or by mere incision, or by laying hold of the distended portion of the tunic, and, after having made it flaccid by letting out some of the fluid, cutting it off. But if there be complete disorganisation of the interior of the eye-ball, and the staphyloma be very large, or if there be several, "extirpation" may be preferable. The after treatment is the same as for the operation of "staphyloma corneæ."

Staphyloma of the cornea and of the sclerotica may co-exist. "Extirpation" is, for the most part, needed; but "abscission" should be practised when it may.

Enlargement of the eye-ball with disorganisation is the expression that I apply to increase of the entire eye-ball, attended with disorganisation, in which there certainly is not staphyloma of the cornea, according to the definition that I have given, nor yet of the sclerotica.

In this affection the cornea is not lost, and the iris covered by a plastic material; it is enlarged, sometimes conical, and of a dark blue colour. The sclerotica does not generally yield in any one spot, but is uniformly distended in every part, with more or less of its whiteness, being dark blue or brown, or coloured in spots.

This state answers to what is called by systematic writers dropsy of the globe, or hydrophthalmia, and may be an idiopathic affection, in which case it is more frequently seen in strumous girls; or it may result from unhealthy action consequent on wounds. It is more generally called "sclerotico-choroiditis;" the fact is, that there is general imflammation of the whole eye-ball, not one of its parts escaping, and each exhibiting changes which arise out of its peculiar organisation. The cornea generally suffers the least, its circumference alone may be opaque, perhaps the whole only opaque, or both opaque and enlarged, or a part only may be thus changed, so that its implication is a matter of degree only. The demand for Surgical aid may arise, as in true staphyloma of the cornea or sclerotica, from the great increase in the volume of the eye, and the consequent symptoms of irritation and sympathetic affection of the other eye; or what is more likely, from the mere pain, which is insupportable, and seems to arise solely from distension; a result almost inevitable when the eye is much stretched. The treatment must be precisely after the principles laid down for the reduction of staphyloma of the sclerotica. Tapping the eye with a broad neeedle every two or three days, either through the cornea, or posteriorly with pressure by compress and bandage, has been recommended as likely to be seviceable in this general enlargement, especially if done early, and its advantage is positively spoken of by some Surgeons.

ORIGINAL COMMUNICATIONS.

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A PLAN FOR THE PREVENTION OF THE FATAL CYSTIC DISEASE OF ICELAND.

By ARTHUR LEARED, M.D., M.R.I.A.,
Physician to the Great Northern Hospital.

[This paper has been translated by Dr. Hjaltalin into Icelandic. It was published at Reykjavik, and largely circulated in Iceland. The people were previously quite ignorant on a subject of such great importance to them, and it is believed that the knowledge they will have gained will not be without good results. The plan proposed was well received, and its adoption is under consideration. It seemed to the author that the paper would also prove interesting to the English reader.]

The inhabitants of Iceland are afflicted with a fatal and loathsome disease, to a degree unknown in other countries. Tumours of a peculiar kind form in the body, no part of which is exempt from their encroachments. The internal organs, as well as the muscles and bones, are in turn affected. The sufferers may be recognised in all parts of the country, but especially in the inland districts, by their languid looks and sluggish movements. Not only is much suffering induced, but Dr. Hjaltalin, the well-informed Physician resident at Reykjavik, told me during my recent visit to the island, that a fifth of the total mortality was caused by this disorder. A considerable number of sheep and oxen also fall victims. To arrest or to diminish such frightful consequences demands every exertion on the part of the inhabitants, and the object of this paper is to propose a remedy which could not fail to be effective. But it is first requisite that the grounds upon which this statement rests should be thoroughly understood. It must be clearly shown that the disease is preventible.

The Tumours which form consist of Bladders distended with Fluid.—These fatal tumours consist of thin membranous, slowly enlarging cysts—bladders I shall for convenience call them—distended with fluid, which, by their pressure, interfere with the functions of adjoining organs, or even destroy the organs themselves. It is nothing uncommon to find the human liver almost entirely disorganised, and it is easy to understand how great suffering and ultimate death are the results.

The Bladders possess Independent Life.—It is now proved beyond all question that the motionless bladders are living beings, and that they are produced from eggs taken into the body they infest. It is also proved that the creatures in this stage of their existence do not produce eggs, but that under certain favourable circumstances they are changed into egg-producing worms. Some details will be necessary to make these changes clearly understood.

The Bladders are Immature Tape-worms.—The singular manner in which intestinal worms propagate themselves long baffled the researches of naturalists; but the labours of the distinguished Danish *savant*, Steenstrup, followed by Von Siebold, Eschricht, Küchenmeister, Leuckart, Cobbold, and others, have at length explained the reproduction of the tape-worms, the most injurious of the tribe. They have proved that the worms pass through a stage of immaturity, in which the resemblance to their parents is so remote that the connexion had been altogether overlooked. The change of the caterpillar into the butterfly affords the most familiar analogy of this difference of form.

The Icelandic farmer is well aware that in the livers and amongst the intestines of oxen and sheep, and in the brains of sheep affected with staggers, he often finds bladders filled with fluid which evidently form no part of the animal. These bladders, of exactly the same nature as those of the human subject, are undeveloped tape-worms, which become mature in the intestines of an animal suited for their reception.

Mature Worms mainly supplied by Dogs.—In Iceland the animal essentially concerned in this matter is the dog. It is true that the inhabitants themselves may be the medium of propagation, but as they are not often affected with tapeworms, this can seldom happen. On the other hand, Dr. Hjaltalin states that, as a rule, the dogs all pass pieces of the worm.

The mature worms consist of a greater or less number of thin flat pieces, jointed together, which, gradually diminishing in size, terminate in a very small rounded head, which attaches itself to the intestine of the animal. Some species are many feet in length, while there is one which measures hardly two lines.

Few can fail to have observed whitish, still moving joints of the larger species issuing with the excrement from the dog, or lying motionless on the ground. It must not be supposed that loss of these segments indicates weakness or tendency to death in the worm itself; their separation is, on the contrary, the natural mode of propagation.

Each segment is filled with innumerable eggs, invisible to the unassisted eye, which are not set free in the intestine of the dog, but in the outer world by the decay of the case containing them. It is impossible to say to what extent these eggs preserve their vitality; but so resistent is the outer shell, that I have found them by examination with the microscope quite intact after having been steeped for twelve hours in strong sulphuric acid. It seems that desiccation is most fatal to their vitality, and there can be no doubt it is for this reason that sheep are much less liable to staggers in dry seasons and on high grounds, than when the season is wet or their feeding grounds are low and damp.

Development of the Tape-worm Eggs.—The eggs of the tape-worm having reached the stomach of an animal adapted for their development, soon produce minute creatures, provided with a boring apparatus, by means of which they penetrate the tissues of the animal. They now pass instinctively to particular regions, or having penetrated in all directions, those alone survive which reach suitable parts. These parts vary with the species of worm; the liver is the most common seat of that which inhabits the human subject; the brain in case of sheep; and the muscles in that of the pig.

Difference in the Bladders due to Difference in the Worms.—Three or four species of tape-worm exist in the dog, which as already stated, are of very different sizes. It is remarkable, however, that the smallest worm produces some of the largest bladders.

Two varieties of the large bladders have been described; one attains the size of a small orange, and has a single neck and head, which it has the power of projecting beyond its globular body. This creature is frequently found amongst the abdominal viscera of ruminants, and more rarely in those of men. The other species grows to a much larger size, and possesses a remarkable power of reproduction. In cutting up cattle, bladders are often found which, besides fluid, contain other smaller bladders. On the inside surface of the parent bladder minute vesicles are produced, which, gradually enlarging, become at length detached. These daughter vesicles, as they have been called, produce others in their turn—granddaughter vesicles—and each vesicle may contain several heads. It will therefore be observed, that while each cyst or bladder is produced from a single egg, the bladder is itself capable of giving rise to other bladders containing heads, which may be developed into egg-producing worms. This resembles the double mode of propagation of some plants—by seed and by cuttings. It is this prolific species of worm which in its immature state is so fatal to the people of Iceland.

Destination of the Bladders.—Whatever the difference of shape or size of the bladders, their destination is to remain quiescent until devoured along with the flesh of their host by an animal adapted for their development. The bladders then become digested in the stomach, while the head or heads pass into the intestine, where a neck and long body is speedily superadded.

Those bladders which infest man must, in the great majority of cases, either die of themselves or perish with their host without having produced sexual or mature worms. In a few instances tapeworms may be generated by the bladders making their way into his stomach or intestines, from the liver or other parts, so that a man might thus infect himself with tape-worm, or the bladders having been expelled from the bowels or discharged by ulceration or by a Surgical operation may become swallowed by dogs. But as the species found in man are common to the lower animals, it is plain from what has been already said that the propagation of the worms is easily sustained.

Proofs that the Dog is the medium by which the Worms are Propagated.—The evidence against the dog in this matter rests upon numerous experiments conducted under circumstances leaving no doubt that tape-worms were produced by feeding them on fresh bladders. The conditions necessary for the propagation of the worm are nowhere so complete as in Iceland. The farmers kill their own meat, and the offal—frequently containing living bladders—is the food of the dogs. Abundance of mature worms are thus produced. Again, the whole country is one vast pasture, and dogs are universally employed in managing the sheep. These dogs shed everywhere segments of tapeworms, the eggs from which are diffused by rain and melted snow. These eggs find their way into drinking water, or adhering to articles eaten raw, as bilberries, or the stalk of the angelica, are swallowed by men. The hands are even liable to be infected from contact with the grass, so that the eggs may easily be swallowed with ordinary food, or from the casual application of the hand to the mouth.

The Cystic Disease can be Prevented by Cutting off the supply of Tape-worms. — The difficulty of escaping the danger has been sufficiently insisted upon. I have now to explain the mode of prevention. First, as regards the direct production of the worm. Dogs should be carefully prevented from eating meat containing bladders; livers of oxen and brains of sheep unless boiled are to be especially guarded against. All bladders of the kind should be buried deeply in the earth. Second, as regards the indirect source of the worms, and the direct cause of disease and death of men and animals. The most effectual mode of destroying the tape-worms would be destruction of the dogs. But as the utility of the animals places that out of the question, we must destroy the worms alone.

A Mode of Destroying the Worms proposed.—To effect this, it will be necessary to submit all the dogs in the island to a certain treatment, for which purpose fortunately a powerful and manageable remedy exists. This is kamala, a coarse, reddish-brown powder, the produce of a plant growing in India, where it is used as an infallible remedy for expelling tape-worms from dogs. The first cases of its employment in England, showing its great efficacy against the worm in the human subject, were published by myself. It has the advantages of being cheaper and more readily taken than any other remedy. If obtained in large quantity, a sufficient dose would cost about a penny, and, being tasteless, the medicine could be given mixed with butter. After taking the dose, the dog should be confined until the worms are passed, when these, and the accompanying excrement, should be carefully collected and burned, as suggested by my friend Dr. Cobbold, or buried deeply, if fire is not at hand.

The Dose of Kamala given the Dogs should be repeated.—As, however, the head of the tape-worm is not always eradicated at first, and the worm is then reproduced, it would be necessary to repeat the dose twice more, at intervals of six weeks, carefully burning any worms, etc., as before. By this plan the great majority of dogs would certainly be freed from the worms, although it might be desirable to prolong or to repeat the treatment in exceptional cases. To insure success the treatment should be undertaken throughout the island within a given period. It would be of little use for a farmer to cure his own dogs, while those of his neighbours continued to pollute his fields. Probably the most effectual mode would be to make the matter compulsory as vaccination is at present in Iceland. Taking the number of dogs at a third of the inhabitants, would give 20,000 as the number to be treated, and depôts might be established, from which the people could gratuitously obtain the medicine.

If this plan of treatment were rigorously carried out, subsidence of mortality from the cystic disease would gradually follow. It must be gradual, because the parasite once established in the body is sometimes known to live there many years. As sheep and cattle are usually killed when badly diseased, few chronic cases are found amongst them, and therefore a marked diminution of the number affected might be quickly expected.

Should my views be adopted by the Government and people of Iceland, I am prepared, in conjunction with Dr. Hjaltalin, to draw up further details of the measures to be pursued, which might be printed and circulated throughout the country.

ON THE USE OF TANNIN IN INFLAMMATORY AFFECTIONS OF THE CONJUNCTIVA.

By G. R. SHERATON, L.R.C.P.E., M.R.C.S.

In consequence of the great discrepance of opinion that seems to exist respecting the relative value of the local and general treatment of ophthalmia, each of which have been extolled and variously estimated from time to time, I submit to the consideration of my Professional brethren the result of my experience in this class of disorders, in which I shall attempt to show the vast superiority of the local over the antiphlogistic treatment, of the value of astringents generally, and of tannin in particular. But in the treatment of this, as in that of other diseases, there must necessarily be considerable modification made dependent upon its cause, for if arising from constitutional causes, that state of constitution must be remedied, whilst the local treatment is merely palliative and of secondary import; but local affections dependent upon local causes obviously require local treatment. Inflammatory affections of the "conjunctiva" usually belong to the latter class. Nowhere do we find the inflammatory process so admirably shown, or the effect of remedies so easily and accurately observed, the slightest change in the congested membrane towards resolution, or increased congestion, the most casual observer cannot fail to perceive.

How frequently have we seen the antiphlogistic treatment persevered in till the system has been drained of its blood, without producing the least beneficial effect, otherwise than relieving the co-existing symptomatic fever, with a succession of blisters only to increase the vexation and disappointment. If we look over the list of local remedies that have been successfully employed in the treatment of the ophthalmia, we will find them to be astringents, as plumb. acet., argent. nit., zinci sulph., etc., and that their beneficial results are in proportion to the amount of astringency which they possess.

Astringents are also indicated on theoretical grounds, the *modus operandi* of which upon the living tissues is to a considerable extent mechanical by contracting the fibres and capillary vessels of the part to which they are applied, by which less fluid is admitted into them. But the astringents ordinarily in use, and derived from the mineral kingdom, are inadmissible during the acute stages, in consequence of the violent irritation they produce if applied directly to the membrane, except in a very ineffectual degree of dilution.

On these grounds, then, I have been led to employ tannin, which is probably one of the most powerful astringents, whilst its comparative freedom from irritation renders it a safe and effectual remedy for the class of cases which I have proposed. The manner which I employ it is in the form of solution of tannin, ʒj.—ʒij. to aq. distil. ℥j.

A small portion of this is dropped into the eye, which at first causes a smarting sensation with a gush of tears, and which is succeeded by dryness and a feeling of comfort. This is to be repeated three, four, or a dozen times a day as circumstances require. The effect produced is soon made apparent; the distended capillaries seem to become unloaded of their stagnant contents, increased lachrymation and muco-purulent discharge, if present, is checked, the organ becomes more fitted to perform its office, and the dependent constitutional symptoms are mitigated and disappear. I have now treated a great number of cases most satisfactorily in this manner, without ever having had occasion to deviate from that course in the slightest degree when the result of external causes and unconnected with constitutional diathesis. Though chemosis when present seem to retard the progress somewhat, probably in consequence of the effused fluid for a time preventing its full constrictive influence upon the capillary vessels. Since I have been thoroughly convinced of the utility of tannin as a remedial agent in this class of cases, I have modified the mode of application to suit the exigencies of the various cases, *e.g.*, by its combination with some aqueous extract of a sedative drug, as solution of morphia, belladonna, opium, etc., to relieve the distressing pain, heat, and smarting that always to a greater or less extent accompany this disorder. I have also found it to be extremely useful during the acute stage of strumous, phlyctenular corneitis, removing the vascularity more expeditely than any other remedy that I have hitherto employed, and probably tending to contraction of the resulting ulcer, and by its combination with the aqueous solution of belladonna, etc., soothes and relieves the intolerance of light; though it has usually been my practice to employ the stimulating mode of treatment as soon as the fasciculi of vessels had disappeared. I have also been careful to secure a suitable regimen, and a dose of aperient medicine when such was deemed necessary.

PAPERS ON ENGLISH AND CONTINENTAL SPAS.

By JULIUS ALTHAUS, M.D., M.R.C.P. Lond.

(Continued from p. 239, vol. I., 1863.)

The salts which are precipitated on boiling mineral waters are used in many watering-places, and are also exported. Those most extensively employed are the Carlsbad, Epsom, and Krankenheil salts, and the Vichy, Bilin, and Gleichenberg pastilles. Such salts by no means constitute *in nuce* the mineral water from which they are extracted, and if again dissolved in water, the solution only slightly resembles the spa itself. It is easy to understand why this should be so, if we consider that by boiling not only do the gases escape altogether, but also protoxide of iron is changed into peroxide, sulphurets into sulphates, and bicarbonates into carbonates. Carlsbad salt merely consists of sulphate of soda, carbonate of soda, and chloride of sodium, and the proportion of sulphate of soda contained in this salt is much more considerable than that contained in the mineral water itself. Krankenheil salt consists of carbonate and sesquicarbonate of soda, chloride of sodium, sulphate of soda, silicate of soda, sulphate of potash, iodide of sodium, bromide of sodium, and crenic acid. The pastilles of Vichy, Bilin, and Gleichenberg consist of carbonate of soda, sugar and gum. Such salts and pastilles may be used internally and externally. They are much employed for making cataplasms for engorged glands, eruptions of the skin, etc. For this latter object they are first dissolved in water, a piece of linen is then saturated with it, and tied to the affected part, which proceeding is repeated as often as the linen becomes dry, so that the part acted upon is, as it were, in a continual vapour-bath. Moreover, it is possible that certain parts of the salines may, if the operation is continued for a certain length of time, be absorbed by the skin, and thus produce beneficial effects.

Medicated soaps are also prepared with the salts extracted from certain mineral waters. At Carlsbad "Sprudel-seife" is prepared by adding oil to the mother-lye made of Sprudel water. At Krankenheil so-called iodine-soda, and iodine-soda-sulphur soaps are prepared and successfully used in chronic diseases of the skin. One or two pieces of such soaps are added to a bath, or the suffering parts are well lathered and rubbed with it.

Spray baths of mineral waters have lately been introduced into practice by Messrs. Sales-Girons and Mathieu. M. Girons, who recommends such baths chiefly for diseases of the respiratory organs ("Thérapeutique Respiratoire"), started from the idea that, since the inhalation of the natural vapours arising from the springs had been shown to be very beneficial in certain diseases of the air-passages, even more striking effects might be obtained by reducing the mineral water itself to spray or mist, and to apply it locally to the mucous membrane of the larynx, the trachea, and the lungs. At first he set apart a chamber in which the patients could inspire the spray; and afterwards constructed a portable apparatus, by means of which spray-baths may be taken in the patient's own room.

The proceeding just mentioned has been subjected to a severe criticism on the part of Messrs. Réné-Briau, Pietra Santa, and Champouillon. M. Pietra Santa, of Eaux Bonnes, asserts that the spray produced by M. Girons' apparatus does not contain the essential constituents of the mineral waters. Sulphuretted hydrogen and sulphate of soda, which are amongst the most important constituents of the waters of Eaux Bonnes, could not be discovered in the spray; besides which its temperature had fallen from 86° to 64°. On examining the urine of persons who had inhaled the mist, no trace of sulphur could, by the addition of nitrate of silver, be discovered in the urine, which may always be done when sulphurous waters have been internally administered. M. Pietra Santa denies that mineral water spray can arrive in the bronchial tubes, nor did he find any benefit result to two patients suffering from chronic laryngitis who inhaled the spray for twelve days. M. Réné-Briau asserts that, even if the apparatus were so constructed as to disseminate the mineral ingredients of the water, this could never penetrate into the air-passages, their structure being such as to preclude contact with anything but the atmosphere, or an analogous mixture of gases. Even pure steam is, according to the same observer, only tolerated when greatly diluted with air. Every liquid on first entering the larynx causes cough by reflex action, as shown by the therapeutical experiments of Trousseau, Bretonneau, and Barthez; and on causing patients to inhale spray, according to M. Girons' directions, no cough was produced. In forty-seven patients treated by M. Réné-Briau, at Eaux Bonnes, this Physician satisfied himself that the pulverised mineral water was immediately condensed in the mouth, nostrils, and pharynx, and ran in a fine stream down the chin. Besides, it appeared that only a tenth part of the water used for these experiments really became pulverised, and that even the largest portion of this was miscarried to neighbouring parts, and did not arrive in the mouth. Experiments made with a pulverised solution of perchloride of iron in dogs and horses also showed that nothing of this substance penetrated into the bronchial tubes of the animals. M. Champouillon caused a patient who suffered from bronchitis to inhale the spray of a similar solution, but could not discover any traces of it in the expectoration afterwards discharged by that patient. While M. Girons' propositions have thus been strongly assailed, there are, on the other hand, the experiments of Henry, Demarquay, and Poggiale, which are strongly in favour of the same. M. Henry contends that he has found all the really important elements of the mineral waters in the spray produced by M. Girons' apparatus, and that he discovered iron in the bronchi of a pig which he had caused to inhale ferruginous spray for half an hour. M. Demarquay's experiments on rabbits, dogs, and patients seem indeed to leave little doubt that mineral water spray may really enter the respiratory organs. Amongst others, he operated upon a patient who had a permanent tracheal fistula; she was made to inhale a pulverised solution of tannine by the mouth, and by applying the appropriate tests to the fistulous opening, the presence in the trachea of the substance mentioned was discovered.

Almost all of those animals which were not killed after having inspired a solution of perchloride of iron, died of violent broncho-pneumonia within twenty-four hours after that operation. M. Poggiale confirms that if sulphurous thermal waters are transformed into spray, they lose by far the largest proportion of the sulphur they contain, and that their temperature is, moreover, considerably lowered. M. Durand-Fardel (a) considers that pulverised liquids penetrate largely into the region above the glottis, and that they also reach the larynx and the trachea, but not the bronchial tubes. The inhalation of mineral water spray can therefore only be useful in affections of the mouth and pharynx, and perhaps in those of the larynx and trachea, but not in diseases of the lungs.

M. Mathieu has recommended the use of general spray-baths of mineral waters, instead of ordinary mineral water baths. Proceeding from the idea that in a common bath that portion only of the liquid is of use to the patient which is in immediate contact with the skin, and which is only slowly and imperfectly renewed, he constructed an apparatus by means of which the quantity of fluid can be greatly economised, while, at the same time, fresh layers of liquid could continually be brought to bear upon the surface of the body. By means of M. Mathieu's apparatus the patient may, with the expenditure of only five to seven pints of liquid, remain in a spray-bath for a whole hour, and costly medicated liquids may thus be administered at a trifling expense. M. Hardy, who has used such spray-baths in his clinique, in the Hôpital St. Louis, has found the effects produced by them very similar to those of ordinary water baths; while M. Gavarret, in his report to the French Academy, speaks highly of the invention, which he recommends for the treatment of scrofula and diseases of the skin. In affections of the scalp and the face, spray-baths are more especially useful, because their action is so mild that the patient may expose the head to the spray for a considerable time without inconvenience. Baths of the natural Carlsbad, Vichy, Ems, Wiesbaden, and other waters, may therefore now, by means of this apparatus, be given in Hospitals and in the patient's own room, at a moderate cost. However ingenious M. Mathieu's invention, it is well to state that the "idea" upon which it is based, viz., that that portion of the water alone is of use to the patient which touches the skin, is altogether incorrect, for thick layers of water have an action widely different from that of thin layers, not only as regards conduction, but also radiation, evaporation, and a variety of other influences.

The douche, or affusion of a jet of water to different parts of the body, is, when properly administered, a most excellent auxiliary to a mineral water cure. The action of the douche depends chiefly upon the quantity of water which is poured down upon the patient, the force of the stream, and the length of time during which it is applied. The so-called Scotch douche, which consists of an alternation of hot and cold water, seems, in many cases, preferable to the warm douche. The sensation produced by a proper application of the douche is, to most persons, exceedingly pleasant. After it has been applied for a time varying from five to fifteen minutes, the patient should be dried with a Turkish towel, then wrapped up in flannel and blankets, and remain in bed for an hour, in order that perspiration may not be interrupted. The doucheurs and doucheuses of Aix-la-Chapelle, Aix, in Savoy, and Wiesbaden have the best, and those of Balaruc, in France, the worst reputation for dexterity.

The uterus-douche employed at Ems deserves special mention. The water used for this purpose is that of the Bubenquelle, which furnishes about 975 cubic feet of water in twenty-four hours, and which spouts forth from a basin in a jet five lines thick and three inches high. The patient is seated on a perforated stool, and the jet is allowed to penetrate into the vagina. The water has a temperature of 89°. The force of the jet, and the chemical action and temperature of the water, have, in many cases of hypertrophy and induration of the uterus, proved curative; menstruation has been re-established, and conception rendered possible.

Carbonic acid baths are given at many watering-places. The bath is either local or general. If the latter is prescribed, the patient sits in a tub, the anterior part of which may be opened and closed *ad libitum*, in order to allow going in and out. The tub contains a movable seat, and a contrivance by which the neck is surrounded by a somewhat tight collar, in order to prevent the escape of the gas, the head being left free. This tub is furnished with a double bottom and two pipes, one of which admits aqueous vapours, and the other carbonic acid. The former of these pipes opens between the two bottoms, and the latter about two feet above the upper bottom. It is therefore possible, by means of this apparatus, to give either vapour or carbonic acid baths, or both at the same time. In the majority of cases it is advisable to let vapours in the tub first, so that the skin of the patient may be moistened and thus become more sensitive to the subsequent application of carbonic acid. Carbonic acid may also, by means of special contrivances, be made to act upon certain parts locally, such as the generative organs, etc. Carbonic acid is also inhaled in inhalation-rooms, as, for instance, in Franzensbad, where such a room has been built over the far-famed Polterbrunnen, from which powerful exhalations of carbonic acid gas continually take place. Rooms for the inhalation of the natural vapours ascending from the springs (especially of nitrogen), and of the vapours developed in preparing brines, are also set apart in many watering-places for use in diseases of the respiratory organs.

Finally, a few words on mineral mud and moor, whey, "grape-cures," and "pine-leaf-cures," which are much employed simultaneously with, or after mineral water cures. The mud of the Nile was recommended by Galenus for therapeutical purposes. The moors chiefly employed at the present time are those of Franzensbad, Marienbad, Pyrmont, Meinberg, Abano, Montmorency, and Valdieri. Mineral mud is, in most cases, a product of the decomposition of plants under the influence of meteoric or mineral water. In a few places, however, mineral mud issues, as it were, ready made from the ground. Mineral moor is formed wherever mineral water flows through moorland. The minerals contained in the water act upon the organic substances of the moor, whereby many new compounds are formed; thus sulphates are changed into sulphurets, vegetable acids into carbonic acid; phosphoric acid combines with iron, lime, and other earthy substances; peroxide of iron is changed into protoxide, and sulphuretted and carburetted hydrogen and ammonia are evolved. According to the prevalence of certain ingredients in the moor, sulphuretted, carburetted, table salt, earthy and gelatinous mineral moor are distinguished, but such a classification is of very little practical importance.

(a) *Gazette Hebdomadaire*, etc., May, 1862, p. 285.

It is almost certain that no ingredients of the mud and moor are absorbed, with the exception only of carbonic acid, sulphuretted hydrogen, and formic acid. The action of mud and moor is chiefly mechanical. They have a higher specific gravity than water, and the skin becomes considerably congested under their influence; besides, perspiration and radiation are in a great measure prevented, as the humus and alumina which are contained in these substances cover the skin, as it were, with an impermeable layer. Mud and moor also possess a less considerable capacity of heat than water, so that it is possible, by means of them, to apply a more considerable degree of heat than by water-baths. The action of mud and moor-baths is also different according to their temperature and the length of time they are applied. If the temperature of the bath is low, the pulse is retarded; if it is high, the pulse is accelerated, and vertigo, sickness, ringing in the ears, and other unpleasant symptoms may be caused by it. Mud and moor-baths, both local and general, are useful in all cases in which warm water-baths and cataplasms are advisable. They are chiefly employed in diseases of the skin, suppressed perspiration, inveterate gout, and rheumatic contractions.

Whey is milk from which caseine and butter have been removed. It is prepared by adding acetic acid or rennet to milk. Four to six drops of good rennet are sufficient to transform twenty-four quarts of milk into whey. This is a nearly transparent liquid, of yellow-greenish colour, aromatic odour, and a sweetish taste. Its chief ingredients are sugar of milk (from 380 to 600 grains in the pound), chloride of potassium (from 13 to 15 grains), carbonate of soda (3 to 4 grains), and chloride of sodium (2 to 3 grains); besides which it contains small quantities of iodine and fluorine. For preparing whey, goat's milk is generally preferred, but the milk of cows, asses, and sheep is also very suitable for this purpose. The most renowned whey cures are those of Appenzell, Gais, Heiden, Kreuth, Meran, and Ischl.

Whey is used for drinking as well as for bathing. Whey-baths have been found to reduce the frequency of the pulse, and are used in anæmia, scrofula, gout, and general debility of infants. Whey is drunk either pure or mixed with water. It is for most persons easily digestible, promotes the appetite, and has a gentle action upon the bowels. Large quantities cause loss of appetite, diarrhœa, and great aversion to the drink. In some persons, however, even small doses produce sickness, constipation, and even icterus. Whey is no specific remedy against any one disease, but is useful for improving the nutrition, and gently stirring up the abdominal secretions. It may thus be prescribed for persons suffering from scrofula, gout, hæmorrhoids, intestinal atony, and irritability of the nervous system; but it may be dangerous where there is a tendency to congestion and hæmoptysis.

A methodical use of grapes is not unfrequently prescribed after mineral waters. Grapes contain more nitrogenous matter, vegetable acids, and lime than whey, and no milk-sugar, but grape-sugar; otherwise, the juice of grapes and whey resemble each other in their chemical composition. The mineral constituents of the juice of grapes are analogous to those contained in the spas of Fachingen, Geilnau, and others; but the former contains a rather considerable amount of phosphoric acid and potassium, which in mineral waters are only found in minute quantities.

The best time for "grape-cures" is the latter part of September. The quantity to be taken varies from one pound and a-half to six pounds per diem. Grapes agree very well with most persons; sometimes, however, palpitations of the heart, epistaxis, hæmoptysis, and other symptoms have been observed after a methodic use of them. This generally renders the fæces darker and more fluid, and augments the quantity of secretion. Grapes are useful in abdominal plethora, scrofula, tuberculosis, gravel, and certain diseases of the nervous system.

Pine-leaf-cures are an invention of more modern date. Preparations of the leaves of Pinus Abies, Larix Europæa, etc., are, in spas and special pine-leaf establishments, used both externally and internally, in connexion with, or after, a mineral water cure. Pine-leaf-water, vapour, and mud baths, douches, and inhalations, are, in these establishments, used externally; by these means irritation and hyperæmia of the capillary vessels of the parts acted upon are produced, and diseases consequent upon an atonic condition of the skin, cellular tissue, and the mucous membranes may be benefited thereby. At the same time, the freshly expressed juice of the pine, and infusions and decoctions of pine-leaves, the chief ingredient of which is an essential oil, are internally administered. By this medication diuresis is increased, the pulse accelerated, and the nervous system gently stirred up. Menstruation frequently ensues earlier under the influence of the treatment, and obstinate cases of chlorosis, gout, rheumatism, scrofula, etc., are beneficially affected.

It is impossible to determine beforehand how long a mineral water cure should last in a given case. This entirely depends upon the symptoms observed in the course of the treatment, and should therefore be left to the judgment of the Physician of the spa; experience shows, however, that in most cases the treatment should not be protracted beyond the space of six weeks or two months. If the patients after having used the water for some time, feel a decided aversion to the same, it should be discontinued at once.

In children, pregnant women, and old persons, mineral waters must be used with special caution. It was formerly believed that pregnancy precluded the use of the spas; but so far from this being the case, they often have a most beneficial effect, if employed during this term, not only upon the mother but also upon the fœtus. Dr. Brück, of Driburg, has lately recorded a case in which the use of the carbonic acid baths of that place checked a tendency which existed in a lady to give birth to monsters. Her general health was very good, but her first infant was a microcephalus. Having again become pregnant, she was advised to resort to the baths of Driburg, upon which she afterwards gave birth to a healthy and well-formed child. In the third pregnancy she neglected the baths, and was again delivered of a microcephalus. When pregnant for the fourth time she returned to the baths, which had the same effect as before. She afterwards again became pregnant, but did not think it necessary to have once more recourse to that treatment which had twice proved so eminently successful, and the consequence was that her misfortune recurred. Since then she became a regular visitor at Driburg, and her further confinements were perfectly satisfactory.

Indulgence in the pleasures of the table, play, and excesses of every description frequently counteract the beneficial effects of a mineral water cure. The Physicians of spas should therefore impress upon their patients the danger of such and similar follies.

Freedom from business and care is likewise an important auxiliary of the treatment. Patients who resort to the spas should keep in mind the lines inscribed on the thermal baths of Antoninus, in Rome:—

> ' Curæ vacuus hunc adeas locum,
> Ut morborum vacuus abire queas;
> Non enim hic curatur qui curat." (a)

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASES OF TUBERCULAR MENINGITIS IN ADULTS WHICH HAVE OCCURRED LATELY IN GUY'S HOSPITAL; WITH REMARKS ON THE OBSCURITY OF THE EARLY SYMPTOMS.

[Communicated by Dr. WILKS.]

I NEED scarcely repeat the remarks which are constantly being reiterated concerning the morbid anatomy of tubercular meningitis. It is possible, and indeed highly probable, that the whole brain structure is affected, but it is only on the surfaces, both externally and internally, that the changes are appreciable. We find generally a flattening of the hemispheres, if there be much ventricular effusion; a slight greasiness of the arachnoid, indicative of the faintest degree of inflammation of this membrane; a large mass of lymph at the base covering the pons Varolii and upper part of the spinal cord, fissure of Sylvius, optic commissures, etc., and, if excessive, passing up the sides of the brain in the sulci of the temporal region. No tubercles are generally apparent until the membranes be removed, when they will be found in large quantities in the Sylvian fissure and in other parts of the pia mater, especially those portions which dip between the convolutions. The ventricles contain an increased quantity of fluid, and the walls are soft, especially the septa, which may be broken down or be diffluent.

(a) "Devoid of care approach this spot,
That you may part devoid of sickness;
There is no cure for those who care."

The peculiarity of the inflammation is so marked in the lymph being almost confined to the base and absent at the superior surface, that tubercles may nearly always be expected when this condition is found; it is one, it will be seen, which is in marked contrast with acute simple meningitis, where the whole surface of the brain is covered with lymph, and which is a disease comparatively rare, and running its course in three or four days. In the latter form of disease no tubercle is found; when such a case has occurred, I have always confidently asserted that no tubercle is present, and the statement has always been verified.

Both these forms of disease are to be contrasted with simple arachnitis, or that case where the lymph or purulent matter is found in the arachnoid cavity, for in the former the inflammatory product is beneath the visceral arachnoid. This arachnitis may be associated with a general meningitis, but whenever it exists I believe the dura mater vessels have supplied the inflammatory products, and the affection has been set up in connection with disease of the bone or injury—generally the latter. I am unacquainted with a simple idiopathic arachnitis.

I am also constantly saying that tubercular meningitis is essentially a constitutional disease, and in the great majority of cases is associated with tubercle in other parts of the body. Louis has said that if tubercle exists in any part after the age of puberty, that it will invariably be found in the lungs; this is true with only the narrowest exceptions; but he might have gone still further, and widened his proposition; for, according to my own experience, Louis' statement is true of all ages, and therefore I should be inclined to say that if tubercle exist in any part of the body, irrespective of the patient's age, it would almost invariably be found also in the lungs. I have never collected my cases to prove the position, but knowing how common tubercular disease is, I am sure that we do not find one case in a year which affords an exception to the rule; indeed, I have very little doubt that it is true in 99 cases out of 100. It is remarkable therefore that having gone some years without meeting with such an exceptional case that we should lately have had two instances where the lungs were free. In Case 3 no tubercle could be found in the lungs after the most rigid search, and in Case 6 none could be discovered in any part of the body excepting the brain.

Such a case as the latter goes far to confirm my own opinion as to the rapid formation of tubercle. Two opinions exist as to the rapidity of its production: the one, that it is quickly formed, and attended by symptoms of pyrexia; the other, that it may remain latent in the organs for years, and that the symptoms attending the final illness of the patient are due to the inflammation which is excited by the irritation of their presence. The former is the opinion to which I have of late years inclined, and one argument for doing so is gained from the fact that in cases of general tuberculosis I have never yet discovered tubercle in the brain by accident, that is, I have never found it unless accompanied by inflammation, and unless, indeed, it had been the chief cause of death with the usual symptoms.

All these points you are constantly hearing discussed, and therefore I would draw attention more particularly to the great difficulty of diagnosis, especially when tubercular meningitis occurs in the adult, and of which we have had several examples lately. When a patient is brought to the Hospital he has generally been very ill for some time, and the symptoms are then, as a rule, well marked; but in the first instance, when he is seen by a Medical man at home, it has been all but impossible to guess at the nature of the complaint. A few years ago I collected a large number of cases of this affection in children, and in none of them was a correct diagnosis made during the first few days of illness, the case being styled one of fever or stomach disturbance, and this error of diagnosis, or rather want of appreciation of the real nature of the case, is the rule. Some of the older writers described cases of inflammation of the brain where cerebral symptoms marked the onset of the disease, and in children they spoke of apoplexia hydrocephalica, where the symptoms were so sudden that they deserved the name apoplectic. I have never met with such cases, but, on the other hand, have invariably found that sudden and violent delirium, convulsions, or other formidable nervous affection, does not indicate an organic disease, but implies merely a blood affection due to a change in a remoter organ, as inflammation of the lungs, or to some exanthema, as small-pox or scarlatina; indeed, one might say, in general terms, that all organic changes come on slowly, and that the violent disturbance of an organ points to a distant region for the cause; for an example, a sudden and urgent vomiting denotes a sympathetic affection, and not an organic disease of the stomach, as I have heard suggested by students on account of the severity of the symptoms. An organic change implies an impairment of function, and thus the only symptoms common to a large number of cases of inflammation of the brain are those shown by mental impairment, lethargy, or coma. In many cases other symptoms occur, as convulsions, strabismus, change in the pupil, or paralysis. All these symptoms vary much, and are due often to accidental causes, the convulsions to the amount of irritation on the surface, the state of pupils to the implication of the optic tracts, and the paralysis to the fact of the corpus striatum or thalamus opticus being a little more softened on one side than the other. In the later stages also the difference in the form of the abdomen is well marked.

In the early stages of inflammation of the brain none of these symptoms may be present, indeed nothing but slight headache or fever, denoting the deposition of tubercles or the lymph around those already formed, and thus the difficulty of diagnosis arises. There is often, however, an irritability of the patient which contrasts in a most marked manner with the torpor of the fever patient, and to this I draw particular attention, as I have found it of the utmost service in attempting to distinguish between the two disorders. When these are at their height, and the patient extremely ill, the fact is often very striking, the one with the inflammation of the brain being distressed by the slightest movement; it is irksome for him to be spoken to; he coils himself up in bed, is peevish, and wishes only to be left alone. At the same time the surface of the skin is often remarkably irritable, so that the patient calls out when touched, often feels cold, and shivers when his skin is very hot. This irritability has, on more than one occasion, caused me to incline towards the diagnosis of a cerebral affection in a doubtful case; even when the patient is in a half-conscious state any movement seems a trouble to him, whereas a patient with fever generally suffers nothing, and he evinces no trouble or alarm when touched. Thus I am constantly repeating the remarks made by our experienced Medical officer, Mr. Stocker, that when a patient is brought to the Hospital, as is often the case, in a semi-conscious state, in a high febrile condition, and there left by his friends without any history of his case, we are forced to do our best to frame a diagnosis from existing circumstances; after judging the absence of pneumonia and other affections, we are often left to decide between fever and acute cerebral disease, and then it will be observed how different do two patients act, as stated by Mr. Stocker, indicative of the irritability of the one and the passiveness of the other. If the case be one of fever, and the bed-clothes be turned down, and the night-dress raised in order to look for maculæ, the patient attempts to assist; he is sensible enough to perceive what is wanted, and he is ready to help, although he may be unable to do so. If the case, on the other hand, be one of inflammation of the brain, the patient whines, he resists, and attempts to drag the bed-clothes over him, in opposition to your wish to uncover him. This difference you must constantly have noticed, and although the circumstance may appear trivial, it is of value in these obscure diseases. In a case which I have seen lately with Mr. Bisshopp, of Lambeth, this nervous irritability was well marked, and I shall allude to the case with the others which have occurred at the Hospital, because in a private case, when observed by an intelligent Medical man, all these little facts may be noted, whilst with us they are rarely seen, because not coming under our cognisance at so early a period of the disease.

In the absence, however, of any nervous symptoms whatever, the diagnosis of tubercular meningitis is very difficult at the onset; nothing but febrile symptoms may be present to denote the patient's illness. In developed fever there may be a rash or other signs to indicate positively the character of the disease, but in the incipient stages it is often only the absence of local affection which determines our choice of diagnosis;

that is, a patient has febrile disturbance, which, being apparently not symptomatic, is regarded accordingly as idiopathic or essential fever. The question as to the immediate cause of fever is one of great interest, and has engaged the attention of the most eminent men, it not yet being satisfactorily determined whether the pyrexia accompanying local inflammations be of the same nature as the febrile disturbance in continued fever, but at the present time they are not distinguishable. Thus it is that if a patient be very ill with febrile symptoms, we look through the body for some inflammatory change to discover what may have given rise to them, and if we fail to find any, we regard the case as one of essential fever, not then deciding whether it will be simple or a severer form of typhoid.

It will therefore be easily seen that if a local change shall be going on in the body in structures which do not disturb any organ, or so deep-seated that they cannot be seen, the febrile excitement which ensues may not be traced to its cause; or the inflammatory changes may be so slight, or cell-growth may be in such a minute quantity that no functional disturbance will accrue; but at the same time these cell-formations may be so scattered through the system that their abundance may be sufficient to produce a high degree of fever. You will therefore easily perceive that tubercular development in the membranes of the brain may be accompanied only by febrile disturbance, and much more will this be so if, as is usually the case, tubercles be at the same time developed in other organs of the body. The fact therefore stands simply thus: that acute tuberculosis produces, as might be supposed, a febrile disturbance, but, in the absence of any local appreciable change, the pyrexia is regarded as essential fever. I am not therefore surprised to read in Dr. Murchison's report of the Fever Hospital that during the last year 365 patients were admitted suffering from local diseases mistaken for fever, and that amongst these were several with acute hydrocephalus.

In the case of general tuberculosis it may happen that nothing but a post-mortem examination will reveal the true nature of the disease; but it generally happens that one organ suffers more than another, and thus the patient is carried off with definite symptoms, as of the head or lungs. In connection with this subject you will often be told that the local disease from which a patient is suffering has followed a fever, and thus we constantly hear of phthisis being one of the sequelæ of fever. This was my own impression some years ago, but from strict inquiries which I have more lately made into such cases I have little doubt that the fever was nothing more than the pyrexia accompanying the first development of the disease. Thus, when a patient has a sufficient rapid deposition of tubercle in his lungs to produce a febrile disturbance, but no physical signs in the chest, the case is called one of fever. In the course of two or three weeks signs of disease in the lungs become well marked, and the patient is said to have phthisis following fever. The same occurs in the case of the brain, and thus it is that, as a rule, every case of inflammation of the brain is treated in the first instance in a trivial manner, or as a case of fever. In instances of true fever, also, the onset of symptoms is not violent, and therefore it is impossible to say whether the case will be a simple one or a more formidable typhus. This difficulty in deciding at the onset will always be an opprobrium of the Profession until the public becomes more enlightened in such matters, and thus it was that the Physicians of the late Prince Consort gained the most undeserved obloquy because they did not pronounce his illness to be typhoid fever from the very first.

Every year's experience increases my conviction that our recognition of morbid symptoms and their signification is far less correct than is generally supposed, and forces me to believe that the good diagnoses of the most distinguished men are gained from the fact that they are better prepared to select amongst the probabilities in favour of one disease rather than another, instead of their having acquired any greater acumen in the appreciation of symptoms. If this were not foreign to my present subject, I could illustrate my proposition from diseases of every organ in the body, but I will refer now merely to cerebral affections, and the means usually employed to distinguish one form from another. The diagnosis is not made so much from existing symptoms as from a number of circumstances which favour one view rather than another; this is perhaps more usually the case in Hospital practice, where a good history of the whole illness is often wanting. Thus it will be seen that in the first of the cases to which I now allude the patient was thought to have typhus, but when admitted I had no doubt the case was cerebral, and in the absence of any local cause considered to be tubercular. In the next case which I relate (although a private one, because an opportunity is gained of learning the early symptoms), I could discover when I first saw the young man that it was only a simple febrile attack, but on the second occasion, when it was clear that the brain was the source of the mischief, I called it tubercular, merely because the probabilities lay in the direction of that form of disease. The third case of the girl who was in the Hospital a short time ago was considered to be one of fever, and when nervous symptoms manifested themselves, it was suggested whether they were not due to the cutting of a wisdom tooth.

As exemplifying how much more we have to learn in the appreciation of symptoms, I will allude to three other cases which have occurred within the last few months. In Case 4 the man died of tubercular meningitis, but because he had suffered much from syphilis and suspected disease of the bones of the head, it was conjectured that the brain affection of which he died might in some way be connected with this. In the two other cases the diagnosis was much more difficult, and at fault entirely, from the history suggesting a particular affection, that of the kidney, and showing how much has yet to be learned as to the distinguishing characters of cerebral affections. In Case 5 the man was said to have had stricture, and as it turned out he had some tubercular affection of the bladder, and some pyelitis of the kidney, the urine being albuminous, and the mind of the Physician diverted to the kidney, it was not remarkable that the cerebral affection from which he died was considered due to uræmic poisoning, and yet it was one of acute tubercular meningitis. In Case 6 it was known that the lad was suffering from an organic disease of the kidney, and at the same time, having had scarlatina recently, there appeared a double reason for supposing that the kidney was the cause of the fatal cerebral symptoms, and yet an acute inflammation was found to be the real cause.

Mistakes of an opposite character are of a more frequent occurrence, that is, persons suffering from uræmic intoxication are thought to have inflammation of the brain, epilepsy, apoplexy, laryngitis, and several other forms of disease.

I might just mention, in connection with the difficulty of diagnosis of cerebral affections, that meningitis is often mistaken for delirium tremens, and *vice versâ*. The following is an example of what I have more than once seen:—An intemperate man receives a severe injury from a fall, and is brought to the Hospital insensible, having broken his leg, ribs, etc. He shortly recovers his consciousness, but in a day or two has cerebral symptoms, which are considered to be those of delirium tremens, and he is treated accordingly. After death he is found to have received an injury to the head, and has died of acute inflammation of the brain.

These few remarks are suggested by the several cases of tubercular meningitis which have lately come before us, the most striking circumstance connected with them being the difficulty in their diagnostication. It was this point therefore which I specially wished you to observe, and thus lead you to study further the symptoms attendant upon various forms of disease, and so be less dependent, as I have shown you we now are, upon extraneous circumstances to guide us to a diagnosis.

Case 1.—*Tubercular Meningitis, with General Tuberculosis—Suspected Fever.*

A RESPECTABLE lad, who had always had good health, and lived in the country, came to London about three months ago as an apprentice in the City. About sixteen days before his death it was observed that his manner was odd, he spoke in a strange style, and was unfit for business. He soon became very ill, but it could not be learned that he had any very well-marked cerebral symptoms, and the case was considered to be one of typhus fever. It was principally from fear of contagion that he was wished to be moved to the Hospital. This was on the twelfth day of his illness, and three before his death. He was then all but unconscious; he would put his tongue out when requested so to do, but was too ill to make any rational complaint. He was very restless, and continually screaming out, generally moaning in a low tone during the day, and being very noisy at night. His tongue was furred and brown; pulse above 100; skin hot; bowels confined for a week, and he had retention of urine. His chest was examined, and the lungs appeared healthy. There was no trace of maculæ, and it was very evident that the case was one of meningitis. In the absence of all direct exciting cause, such as injury or disease of the temporal bone, it was believed to be tubercular as its most probable character. The patient remained in much the same state, unconscious, but constantly raving. His bowels were not moved by repeated doses of croton oil. Finally, the pupils became dilated, and the breathing laborious, death ensuing through congestion of the lungs. He had no convulsions. His friends denied his ever having had a cough or being delicate, and repudiated the idea of any of his family being scrofulous when a tubercular disease of the brain was suggested. On this account they allowed a post-mortem examination.

Autopsy.—Body extremely wasted. The brain presented in a well-marked degree all the features of a tubercular inflammation. The superior surface of the hemispheres was somewhat flattened; the arachnoid greasy to the touch. On the temporal regions some lymph was seen in the sulci. On removal of the brain, a large patch of tenacious lymph was seen to occupy the base, forming a covering to the pons Varolii, optic nerves, etc. The fissure of Sylvius was filled with lymph, and the pia mater crowded with tubercles. The pia mater, when stripped from other parts of the surface, was also seen to contain tubercle. The ventricle contained a large quantity of fluid, and the surrounding walls were very soft. The lungs were much congested, and a few scattered tubercles were found in various parts. The liver, spleen, and kidneys were full of tubercle.

Case 2.—Tubercular Meningitis in a Man Thirty Years of Age —Suspected Fever.

This case occurred in the practice of Mr. Bisshopp, of South Lambeth, and is reported by him.

J. C., aged 30, a carpenter by trade, but for the past month or five weeks he had been acting as a gentleman's servant. His habits were temperate and steady. He consulted me on July 27 for chronic effusion into the left knee-joint, of three or four months' standing. It was unaccompanied with pain, but in walking the joint felt weak. He had never had syphilis nor gonorrhœa. He looked pale, and was nervous and out of health. Iodine was applied to the knee. A simple tonic was ordered to be taken, and more out-door exercise.

On August 3, I was sent for to see him. He stated that he was not well enough for his duties, and his master had sent him home. He complained of being languid and feeble, and thought he had caught a slight cold. His skin was moist; his pulse natural; the tongue slightly furred, and there appeared nothing much the matter. A saline was prescribed.

4th.—To-day he presented much the same symptoms. He had not slept well, and perspired profusely. In the afternoon Dr. Wilks saw the case with me. His opinion was pretty much the same as my own,—that there was not much the matter, and with rest in bed for a few days he would be well, but that his present symptoms might be the antecedents of an attack of continued fever; there was no complaint of headache.

5th.—He had had a restless night, and was constantly talking, and had sweated most profusely. He complained of difficulty in passing water, and was getting in and out of bed constantly endeavouring to pass it. The urine was high-coloured, clear, and free from albumen. When asked if he had any pain in his head, he said no. There was no sickness. He had had a severe rigor in the night, followed by profuse sweating. Pulse 85, soft and compressible. A grain of quinine was given three times a-day.

6th.—He had had a bad night. His mother did not think that he slept at all, and was certain that he was not conscious at times. He was singing hymns a great part of the night, and had had two severe rigors, followed by tremendous sweats. He did not complain of pain in his head, or anywhere else; was perfectly conscious; hands very shaky; there was no marked increase of pulse; tongue slightly furred; bowels properly open.

7th.—I saw him this morning early. He had had a worse night than usual, and was constantly in and out of bed to pass water. He was restless, and had the appearance of a man suffering from delirium tremens. He was sweating profusely. He did not complain of pain in head, but said that it was confused. At 7 this morning I was sent for. The friends stated that he had had a fit of some kind, which had lasted for a few seconds. There had been no convulsion of the limbs, but a choking of the throat, accompanied with a peculiar noise. He was unconscious for a minute or two, but could give no description of the fit. His countenance when seen by me was very pale. Eyelids shut, and quivering like an hysterical girl; pulse 84; bowels have acted; motions clay-coloured and offensive. Blister to nape of neck. Calomel, gr. vj.; ol. croton gtt. j.; ext. coloc. co., gr. iv.; ft. pil., ij. Turpentine and castor oil injection. I saw him again at 9. He was then much worse, and his friends could not keep him in bed. At half-past ten Dr. Wilks saw him with me in consultation, and considered him to be suffering from tubercular meningitis. We could now get no answer to questions, and his pupils were sluggish. Breathing diaphragmatic.

8th.—He had had a better night, and answered questions rationally. His bowels had not acted, and he still sweated profusely. He had frequent desire to pass water. He flinched and complained of tenderness on pressure above the pubes. The bladder appeared empty. The pills were repeated. An effervescing mixture was ordered, and ice was applied to the head. In the evening there was no marked change. Pulse 84.

9th.—He had passed a restless night. His bowels had acted well. At 6 o'clock this morning he got out of bed to stool. I saw him at 10 a.m., and on examining the abdomen found that the bladder was much distended. I drew off a large quantity of clear, acid urine, which became opaque with heat, disappearing on adding nitric acid. He was unable to move the legs at all, and from this time to his death the paraplegia was complete. We could get no answers to questions. He sang and muttered to himself. A grain of calomel was given every four hours. The head was shaved, and ice was applied to the head. 9 p.m.—He complained of great pain in both hip-joints; pressure caused him to flinch, from great tenderness. He answered questions rationally, but did not remember from one minute to another what he had said. Pupils act well to candle-light; the conjunctivæ were injected. Bowels had acted well. In the evening he was talking constantly. Skin hot and dry; tongue moist and furred; pulse risen from 84 to 100.

10th.—He had had no sleep, and was talking constantly, but he answered rationally, though his memory was still bad. He had not changed his position since 6 a.m. yesterday. The lower extremities were paraplegic. Flexing the thighs on the abdomen caused great pain in the hip-joints. His eyes were muddy and bloodshot; skin hot and pungent; tympanitis, especially of the large intestine; spine nowhere tender; breathing diaphragmatic. A large quantity of urine was drawn off, acid, high coloured, very opaque by heat, rendered clear by nitric acid. Pulse 96. Five grains of the iodide of potassium every four hours. 4 p.m.—He had had some sleep, but did not appear to be conscious. The soles of his feet were painful when tickled, but there was no reflex action.

11th.—He had passed a quieter night. Bowels acted well this morning; urine drawn off presented the usual character; respiration quicker, abdominal; skin hot. He sweated profusely about the head and neck. Tongue furred and moist; tympanites. Pupils still sensitive to light, but dilated. He still answered questions. Pulse 120. Dr. Wilks again saw him. 10 p.m.—Catheterism. He continued about the same, but was weaker. He had slight epistaxis, to which he was subject. Six leeches were applied to the temples.

12th.—He had passed a bad night. His bowels were purged unconsciously. The right arm was paralysed. To omit all medicine. 9 p.m.—Pulse 145; respiration 48. Pupils dilated, and scarcely responded to light. Occasional hiccough. Catheterism.

13th.—4·30 a.m.—Tongue dry. He died at 5 p.m. His friends say that he was conscious a short time before his death. He had never been at any period of his illness comatose.

Autopsy Twenty-four Hours after Death.—The head only was examined. The scalp was pale; skull-cap thin. There was a considerable effusion at the base of the brain. The membranes were congested, and studded thickly with tubercles. About an ounce of fluid was found in the ventricles. The septum lucidum was diffluent and destroyed. The whole brain-substance was congested and much softened. The pons Varolii was highly congested and softened. The left crus cerebri presented an appearance of numerous spots of extravasation.

This patient for two months past had been subject to great anxiety from the sudden death of his father, a fact which he could not realise. Since his death, I have heard that for some weeks he had complained of constant pain and confusion in his head. He had sleepless nights, which he had passed in reading his Bible. He had been slow and hesitating in his manner, and was forgetful, a condition of mind quite unnatural to him. He had never been known to be passionate or irritable, but always reflective, calm, and self-possessed.

Case 3.—Tubercular Meningitis at the Age of Eighteen—All other Organs Healthy—Suspected Fever.

Cath. H., aged 18, admitted May 15, and died 25th. She was a dressmaker, and had been in apparent good health until about a week before admission, when she began to complain of her head, and soon became very ill. When taken in, the case was looked upon as one of fever, and wine was given. It was soon apparent, however, that the case was a cerebral one. She lay coiled up on her side in bed, disliking to be touched or moved, and complaining much of feeling cold. Although sensible, she was very drowsy; one eyelid fell, and both pupils were dilated. This dilatation and inactivity of the pupils, when approached by a candle, remained throughout. During the last two days she became unconscious; finally the breathing became difficult, and the skin intensely congested. She had no convulsion nor any paralysis.

Autopsy.—The surface of the brain was slightly flattened, and the arachnoid was greasy to the touch. On each side of temporal region a little lymph could be seen in the course of the vessels of the pia mater. At the base there was a patch of yellow tenacious lymph, involving the optic nerves, etc., surrounding the crura cerebelli, and covering the upper part of the cerebellum. The fissure of Sylvius was filled with firm lymph, in which abundance of tubercles were imbedded. The pia mater of hemispheres also was full of tubercle. The ventricles contained a considerable excess of fluid, but the central parts were not much softened.

The lungs were very carefully examined in order to discover tubercles, but none could be found, nor were any to be seen in the other organs of the body.

Case 4.—Tubercular Meningitis at the Age of Twenty-nine—Suspected to be Syphilitic.

Geo. L, aged 29, was admitted into the Hospital in a bad state of health, which was supposed to arise from syphilitic cachexia, his face being much scarred and his nose flattened from loss of bone. After he had been in the Hospital for some time, brain symptoms came on, which finally became of an acute character. It was thought most probable that he had some syphilitic disease of the skull, and that this had involved the membranes.

The Autopsy showed no disease whatever of the bones, but that the inflammation was of a tuberculous character. The surface of the hemispheres was slightly greasy, as if from incipient exudation; the base had a patch of lymph covering the optic commissures, pons, cerebellum, etc. The membranes contained numerous tubercles. The ventricles contained about three times as much fluid as natural, and the central parts were very soft.

The lungs were much diseased, containing tuberculous cavities.

Case 5.—Tubercular Meningitis at the age of Twenty-two—Symptoms suspected to be of Renal origin.

A man, aged 22, had been troubled with difficulty of micturition for some time, and had had catheters passed. As he became very ill, and fell into a severe febrile condition, he was sent to the Hospital, and was admitted into a Surgical ward for stricture. On being examined no stricture was found, and he was then transferred to a Medical ward. The diagnosis then lay between typhus fever and uræmia, it being suspected, with such a history, that his kidneys might have become involved in an inflammatory disease. He was then in a scarcely conscious state; he had a vacant stare, his tongue was furred and brown, and protruded with difficulty. His abdomen was flat, but one or two spots upon it were closely inspected in reference to fever. There was slight subsultus of the limbs; the respiration was irregular. His most distressing symptom was hiccough, which was constant. Towards evening he was scarcely conscious, though he would speak now and then, but was very restless, and was constantly moaning. His urine was drawn off, and was found to be purulent and albuminous. It was now considered clear that the case was not one of fever, but cerebral, and dependent upon renal disease, the history of the case favouring or suggesting that opinion.

On the following day the symptoms were much the same; hiccough, subsultus.

On the next day he was worse; constant subsultus, delirium, pupils dilated, pulse quick, and at times he was very noisy. In the night he had general convulsions, and died.

Subsequently a further history was obtained, but it did not throw much light on the case, except in the direction of its cerebral character. Some of the symptoms, however, were probably explicable by the discovery of old scrofulous deposit on the surface of the brain. He was a married, steady man, with an hereditary history of insanity in his family, his mother and grandmother being "out of their minds." When a boy he was dull, and often suffered with his head; also for years past had giddiness and headache. Five years ago he was obliged to give up work on account of mental despondency. Six months ago he sprained his back, and had not been well since, suffering from difficulty of micturition and pain in the loins. For the last few days he had a discharge from the urethra, and thus he sought the advice of a Medical man, who passed a catheter. For nearly two months he suffered from hiccough.

Autopsy.—The brain presented the usual appearance of tubercular inflammation. The surface was flattened and greasy. At the base was a patch of greenish-yellow lymph. The ventricles contained an excess of fluid, and the central parts were soft. Tubercles were found throughout the membranes, and were of two different kinds and ages. On stripping off the pia mater, minute miliary tubercles were found, both on the surface, in the fissure of Sylvius, and in other parts; but besides these there were some larger, firm, and yellow masses of tuberculous matter, which also sprung from the pia mater, but were at the same time encroaching on the cineritious surface of the brain, and were imbedded in it. The lungs, liver, spleen, and kidneys were stuffed with tubercles. The kidney also had the mucous membrane covered with lymph, and the bladder was the subject of scrofulous inflammation, whence the purulent matter in the urine.

Case 6. — Tubercular Meningitis at the Age of Fifteen—Suspected Renal Origin of the Symptoms—Tuberculous Disease of the Kidneys, Ureters, and Bladder—No Tubercle in the Lungs.

James J., aged 15, was admitted under the care of the Surgeon for incontinence of urine and suspected calculus. It was found that he had no calculus, but from the character of the urine, and the lad's general condition and history, it was concluded that he was suffering from a scrofulous disease of the bladder and kidneys. Whilst in the Hospital he had scarlatina; during convalescence cerebral symptoms came on, when it was conjectured that these were due to uræmia, there not only being an old disease of the kidney, but it was thought that whatever portion of tissue might be unaffected might have become the subject of a nephritis in connection with the scarlatina, the difficulty of diagnosis being increased by the purulent character of the urine. He lived ten days after the attack, and, as far as could be learned, had no symptoms which were incompatible with uræmic intoxication.

Autopsy.—The brain presented all the usual appearances of tuberculous meningitis. There was a little lymph on the sides, and a considerable quantity of greenish tenacious lymph at the base. This covered the pons Varolii, and extended down the spinal cord as far as the dorsal region. Numerous tubercles existed in the pia mater; the ventricles contained an excess of fluid; the central parts were broken down and diffluent. The kidneys contained large masses of tuberculous matter which were softening in their interior; the ureters were covered with tubercles, and also the bladder at its neck. The lungs were carefully examined, but not a single tubercle could be found, nor were there any in the other organs.

Puerperal Fever at the St. Petersburg Lying-in Hospital.—We have only space to direct attention to an elaborate paper upon this subject, illustrated by numerous tables, contained in the St. Petersburg *Medicinische Zeitschrift*, 1862, No. xi. During fifteen years (1845-59) there were admitted into the Imperial Lying-in Hospital of that city 8036 women. Of this number 1614 suffered from illness, 306 dying. Of these, 380 women were subjects of diseases prior to delivery or the various consequences of labour, and furnished 68 deaths; while 1234 were subjects of puerperal affections in the proper sense of the word, and furnished 238 deaths.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 12.

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CHEAP MICROSCOPES.

The diffusion of practical knowledge keeps but sorry pace with the increasing facilities of acquiring it. The microscope has long been recognised as a necessary means of diagnosis in numerous Medical cases, and yet many intelligent Practitioners of the present day know nothing of its use, and, as an almost necessary consequence, they have but little knowledge of, and less faith in, its value in indicating the cause and symptoms of disease. This is a fact discreditable to a scientific body whose special aim and constant care are employed in ascertaining the cause of disease and the effects that flow from them.

The impetus, however, which the University of London and our lately-awakened older examining bodies have given to practical studies generally, involves those also which have reference to the microscope. The student of the present day is required to be familiar not only with the description (which may be obtained from books), but with the actual microscopic appearances of the tissues and crystalline excretions of the body. He must know unstriped muscular fibre from elastic tissue when it is placed before him; and therefore to him, no less than to the Medical Practitioner who may be called upon to decide some delicate Medico-legal question, a stout, well-made, inexpensive microscope, simple in contrivance, and capable of clearly showing the structure of the various animal and vegetable tissues, and of unmistakably displaying such minute organisms as the human spermatozoon, is indispensable.

We are so frequently applied to for advice respecting the purchase of such an instrument that we feel sure a few remarks on cheap microscopes will occupy a useful place in our columns. We would first insist upon the observance of a general rule, viz., that the instrument be purchased from a regular microscope maker, who is known to have devoted himself to its elaboration, and not from an ordinary mechanician who brings out a microscope incidentally, as it were, and by way of proclaiming that he is not wanting in the mechanical skill which is required to produce it. Something more than mechanical skill is needed.

In selecting a microscope the purchaser, whose predilections do not lead him, or whose pocket does not allow him (we will in either case suppose) to buy an expensive instrument, should look a little forward, and provide himself with a stand to which accessory appliances, such as a fine adjustment, a movable stage, and a sub-stage can be at any subsequent time added. No money should be spent in a host of accessory apparatus; a good working stand and two powers, an inch and a quarter inch are, at most, all that a student needs. The screw aperture in the body for the object-glass should be of the universal gauge lately adopted, so that the best object-glasses when procured may be used at once without further adaptation.

From £5 to £10 must be expended. The three or four guinea microscopes, furnished with inferior foreign object-glasses, found in every optician's shop, must be carefully avoided; they are little better than scientific toys, and, for the examination of animal tissues, they are worse than useless, since, because they cannot show these as they are represented in books, they engender doubt and unbelief.

The first-class microscope makers all supply a cheap student's microscope. Messrs. Smith, Beck, and Beck have given special attention to students' microscopes; they have introduced two—the "Educational," price £10, and the "Universal," price £5. We have often had occasion to recommend the "Educational;" it is furnished with inch, and quarter inch object-glasses of unexceptionable quality; the fine adjustment is effected by a depressing rotation of a sliding tube. This instrument is sufficient for all Medical purposes. It has a fault, however, little in itself, but great in its effects. It is made to double up in a very awkward way along with the accessory apparatus, as if it were intended to be kept packed up, instead of open and accessible for use. This is a great mistake. Packing-cases should be burnt forthwith; they do more to hinder the use of the microscope than anything else. A microscope in the hands of a Medical man is a thing for almost daily use, and a roomy glass shade should be the only obstruction in the way of it.

The "Universal" instrument is strong and durable almost to clumsiness; indeed, we wonder much that the makers should have gone so much out of their usual elegant way to have so unnecessarily dissevered beauty from strength. The object-glasses (inch, and quarter inch), inferior, of course, to those supplied with their best instruments, are good.

Messrs. Powell and Lealand furnish a "student's microscope" with their inch and quarter inch object-glasses, of the excellency of which it is superfluous to remark, for £10 10s.

Mr. Ross supplies his No. 3 stand, without stage movements or fine screw adjustment, for £5 15s., and this is the basis of a complete instrument. The mechanical stage and every other appliance can from time to time be added.

Mr. Pillischer has lately brought out a very cheap and admirable microscope furnished with two eye-pieces, coarse and fine adjustments, movable stage, and a new combination object-glass manufactured by himself. The cost is £7. The object-glass is quarter inch, resolvable into inch and half inch. We can speak most unreservedly in praise of the clearness, definition, and penetrating power of these glasses.

Mr. C. Baker's student's microscope, price £6 10s., is a neat, well-made instrument; it has fine and coarse adjustments to body, and a sliding-stage, and is furnished with a German combination of three powers—one inch, half inch, and quarter inch.

Mr. Ladd has made a very elegant and useful stand, in which the stage movements are very successfully and conveniently effected by means of a magnetic bar. It has the great advantage of being furnished with a sub-stage possessed of rectangular and vertical movements. The price of the stand with an eye-piece is £5.

Our space does not allow us even to enumerate the opticians who have brought out microscopes; most, if not all, are furnished with foreign object-glasses, the chief objection to which is their great uncertainty. Now and then we may meet with a glass of excellent definition, but we as often come upon a glass in which spherical aberration is uncorrected. Many of the stands are strong and firm, others are elaborately rickety. We would, as we have before said, strongly recommend the student to purchase, first of all, a strong, well-made, smooth-working stand, either furnished with a movable stage, or capable of having one adapted to it; afterwards, unless he secure with the stand such an admirable combination as Mr. Pillischer supplies, he must get a quarter inch object-glass. A quarter inch is all he actually needs; and if he cannot afford to get one by one of the best makers, we would recommend him to apply to Mr. S. Highley, who has especially devoted himself to the manufacture of cheap object-glasses. Mr. Highley has introduced them to compete with foreign powers; and, having carefully examined them, we have no hesitation in saying that they far excel the ordinary run of these glasses, and equal the very best we have seen, which is saying much in their favour, since, as we have before remarked, the foreign glasses are occasionally excellent both in definition and penetration. Mr. Highley furnishes two of these object-glasses (inch, and quarter inch) with a firm tripod stand, a magnetic stage, sub-stage, and body possessing eye-piece, and coarse and fine adjustments for £6 6s.

One word of advice, before we finish, to those who by-and-by intend entering to regular Medical studies. Familiarise yourselves with the use of the microscope, and in preserving the objects which you have examined. You want only a little glycerine, dilute acetic acid, and kreasote water for preservative fluids, and then, with the help of a fragment of thin glass and a little Brunswick black, you may seal the object under examination upon a glass slide, and keep it by you for reference. You soon come to learn which preservative fluid suits best. The object to be attained is an air-tight cell. Do not be over careful about appearances at first; neatness will attend experience. If you do not so far master the instrument before attendance upon lectures is begun, there will be no time for learning to do so during your studentship. You will doubtless be then anxious to examine the tissues as you read up their description, but you may find that your inexperience in the use of the instrument causes the expenditure of more time than you can afford, and the microscope is put by until, as you say, "I have more time at my disposal." But the little difficulties which you were unable to overcome in your busy moments grow by lapse of time to such an imaginary bulk as may, perhaps, ever after discourage you from resuming the use of an instrument which, in experienced hands, remains a fund of inexhaustible pleasure and instruction.

THE WEEK.

THE NEW SURGEON TO HER MAJESTY'S HOUSEHOLD.

As many of our readers know that Mr. Spencer Wells edited this Journal for seven years, and only retired from the editorship at the end of 1861, they will understand the interest with which we, his successors, announce that the Queen has been pleased to appoint him Surgeon to Her Majesty's Household. We believe that the Profession will regard this appointment, as we do, as a proof that a man who works hard—in Hospital, sick-room, or in the library—even although he may not be connected with one of the greater London Hospitals, or be a relation or pupil of any of our *Dii majores*—will, sooner or later, reap his reward. Ever since Sir James Clark has held the responsible post which he still so worthily fills, all the Medical appointments which Her Majesty has made at his recommendation have been acknowledged by all the best men in the Profession to prove that he has exercised his power with sound judgment and great care, and that it would have been impossible to select better men than those whom he has been instrumental in placing in the honourable positions which they have filled. It would be unbecoming if we were to say more with regard to his most recent appointment, than that it is evidently no exception to the rule which has guided Sir James Clark in all the Medical appointments in the Court of our Queen.

THE VENTILATION OF SHIPS.

A PLAN of ventilation, invented and patented by Dr. Edmonds, Staff-Surgeon of the *Victory*, is to be tested in the turret-ship *Royal Sovereign*, at present in course of construction at Portsmouth. Dr. Edmonds' proposed system is self-acting, and it professes—

"Not only to furnish an ample supply of pure fresh air to the crew, but also to effect the very important object of preserving the ship's timbers from decay or dry rot, by creating a constant circulation of air throughout the framework of the ship. This is effected by converting the timber spaces from the keel upward, between the 'ribs,' so to speak, of the ship, into draught channels leading into a tunnel shaft fore and aft on each side of the ship's berthing deck, which communicates by cross shaftings with the funnel, the draught of the funnel furnishing the motive power for the suction of a continuous current of air upwards through the ship's timbers, and carrying off the foul air and gases from the ship's hold and bilges without tainting the air the crew breathe on the berth deck."

The effect of the foul gases arising from the bilges and hold of the ship on the health of the crew and officers has been the text of innumerable Medical reports, and necessarily, for in the Navy, since scurvy has been successfully met by an improved scale of diet, it is, perhaps, the most potent cause of disease. The gases make their way into the berth-deck of the crew by the openings over the men's mess-tables, or between the beams and through the perforated zinc employed in the officers' cabins. In some cases the emanations from the bilges are supplemented by the decay of the green, unseasoned timber used in the ship's construction. Hence it is well known that on the healthiest stations, such even as the Mediterranean, a large amount of sickness frequently results. The report in the *Times* on the *Royal Sovereign*, which we have quoted above, states that—

"The Admiralty view Dr. Edmonds' system in such a favourable light that they have ordered it to be applied to the *Zealous*, iron-cased ship building at Pembroke, and to the *Favourite*, at Deptford, both on Mr. Reed's designs. In these two instances, however, Dr. Edmonds' system of ventilation will be carried out in a more complete form than it is being done in the *Royal Sovereign*. The *Zealous* and *Favourite* will have extra air channels in the shape of hollow deck planks, between each beam on the mess-deck, by which means the air breathed by the men below at the mess-tables, or by the officers in the cabins, is at once drawn off and thrown off with the general outgoing stream to the funnel."

We shall be very glad to hear that Dr. Edmonds' plan is eminently successful, and that the country is under another, and no slight obligation, to a Medical Officer of the Royal Navy.

THE WOLVERHAMPTON AND DUDLEY MYSTERIES.

THE inquest which is being held on the bodies of William Cheenery and Rosanna Steadman presents several points of Medico-legal interest. The body of the man was found far advanced in decomposition in a house in Wolverhampton, where he had previously lived with the woman Steadman. The day before he was discovered, the body of a woman, now believed to be Steadman, was found in an empty house in Dudley. The evidence seems to point to the conclusion that the woman must have been concerned in the murder, that she effected her escape to Dudley, and there died, probably from an overdose of laudanum, in the empty house in which her body was found. It also was far advanced in decomposition, and, by some unaccountable negligence on the part of the police, was buried in the clothes which she wore, without even her pockets having been thoroughly searched. The body not having been identified with certainty, it was exhumed by order of the Secretary of State. The features could not be recognised, but the height and general build of the corpse corresponded with those of the supposed murderess, and the clothes were proved to have been worn by her when last seen alive. The examination of her body was conducted by Mr. Nesbitt, Surgeon to the South Staffordshire General Hospital. It was discovered on August 13, a fortnight after she had been last seen alive, and was exhumed on September 9.

"On removing the coffin-lid the body was found lying on its face with the clothes on, and a number of articles of dress on the top of it. Portions of different articles of dress were removed for examination. In the pocket of the dress an old phial cork was found, and in a side pocket, tied round her waist, a number of articles, amongst others a bag containing five half-crowns, Cheenery's rent-book, and a 3-oz. phial, labelled 'Laudanum, poison.' Mr. Nesbitt deposed that the body was much decomposed. The hair (of a brown colour) had all fallen from the scalp, the eyes from their sockets, the flesh from the cheeks, and several teeth from the mouth. Beneath the dress the preservation was more complete. All her clothes were saturated with a dark brown and very offensive fluid, the result, probably, of decomposition, and on a print dress in the coffin were some stains resembling tar. These parts of her dress were removed for analysing. The remains evidently belonged to a full-grown and well-developed, though a small woman, and measured from the crown of the head to the sole of the foot 4 ft. 7½ in., and there were no marks of violence upon it. The skull was sound, and free from all marks of injury, and there were no signs of effusion of blood beneath the scalp. The brain had entirely decayed away. The internal organs were all black, shrivelled, and much decayed. The stomach, liver, and spleen were removed for further examination. A small quantity of dry food was found in the stomach, but the smell of poison could not be detected. A mineral poison might have been detected any time afterwards, but not a vegetable poison, as laudanum, which, being vegetable, would decay as rapidly as the body. The teeth were some of them much decayed, and their falling out might in part be accounted for by the woman having remained so long after death without interment. No bones were fractured, and as far as could be perceived there were no internal injuries."

Mr. Henry Gibbons, the Surgeon who examined the body of Cheenery, deposed that it was discovered on August 14, the body lying on its right side, with its left leg slightly crossing the right.

"The arms were extended, with the palms of the hands downwards. I observed a wound on the nose, and the left eye, lying on the cheek-bone, was out of its socket. The body was very black and very much decomposed. Maggots in great numbers were visible both on the corpse and around it. I did not at that time make any thorough examination. By the direction of the coroner, and in conjunction with Mr. Shelswell, Surgeon of this town, and Mr. Keogh, senior Surgeon at the South Staffordshire General Hospital, I have since made a post-mortem examination of the body, and have examined all other matters that appear to be necessary. The sheet and counterpane of the bed on which the body was found had a very black appearance. There were also marks or stains upon the floor. The upper and under surfaces of the mattress were stained. On the mattress I found three teeth, and on turning up the pillow underneath it, and in about the centre, I discovered another tooth. The straw in the interior of the mattress down the centre was black and damp. The body was black, was very much decomposed, and, considering the state of the weather, had probably been dead about three weeks. The blackness on the body was unusual, and I did not attribute that to decomposition. I observed a cut on the nose; the left eye was hanging at the inner angle of the orbit; the mouth was wide open, the lips were distorted, and all the front teeth were absent. The skin in some parts was hard, in others soft and detached. The hair from the crown of the head was gone, and the right buttock was white and natural. At first sight the body presented more the appearance of a mummy than of anything else. I first proceeded to remove the scalp, and on the left side, underneath the temporal muscle, I found a large quantity of extravasated blood. I did not observe any fracture of the skull. I then removed the soft structure from the face, and found the left nasal bone recently fractured in a vertical direction. There was a great discoloration of the left malar or cheek-bone from recent bruising. I then examined the mouth, and found that all the incisor teeth, four in the upper jaw and four in the lower, had been knocked out; and on the right side of the upper jaw the alveolar process was broken away. I next opened the skull, and found the brain eaten away by maggots. Proceeding then to open the chest, I found on the right side some old pleuritic adhesions; but, otherwise, there was nothing remarkable. The stomach contained only a small quantity of fluid; its coats were quite healthy. The liver and kidneys were small, but healthy. The bladder was empty. I have since made an analysis and a microscopic examination of the stomach and its contents, of a portion of the mattress taken from the upper room, of a part of the straw within the mattress, of a piece of the stained board taken from the side of the mattress, of the sheet, of the skin of the body, and the tea-leaves. The stomach did not reveal any trace of poison. Its contents were ordinary tea and milk, in which also no poison could be detected. The mattress, the straw, and the stains on the floor all revealed traces of human blood in considerable quantities. The sheet had upon it ordinary gas-tar, as had also the skin on the body. Poison could not be traced in the tea-leaves. From the whole investigation and examination I am of opinion—first, that the deceased died from injuries to the head and great loss of blood (apparently several quarts); second, that these injuries and this violence were inflicted by some person or persons other than the deceased himself; third, that after death the body was laid out and the pillow placed under its head; fourth, that after death the body was painted or brushed over with tolerably hot gas-tar (this probably with a view of preventing detection from smell as long as possible); and fifth, that the sheet and counterpane were placed on the body and tucked under the head by some person or persons other than the deceased. The teeth had not fallen out by decay. They must have been knocked out. I am quite sure the fracture of the nose was recent, for if it had not been recent there would have been a deposit upon it, and the same may be said of the malar bone. In the house a hatchet and carpenter's hammer were found, with which the injuries were probably inflicted. The blunt head of the hatchet was oxidised, as if recently washed.

"Mr. Gibbons wished the jury to bear in mind that the mattress beneath the head of the deceased was stained with a large quantity of blood. Another large quantity had also been shed upon the centre of the surface of the mattress, and both pools of blood had met. He was therefore of opinion that not only the head had been injured, but also another part of the person of the deceased. Those injuries must have been very extensive, but in consequence of the advanced decomposition of the body they could not be traced. He was confirmed in this opinion by the fact that life swarmed upon that part of the body and upon the head. Doubtless the fly would attack the injured parts first. On the other parts of the body—the uninjured parts—there was no evidence of the former presence of the fly."

The inquest is adjourned for further evidence. The great difficulty has been the identification of the woman's body as that of Steadman; but the woman seen at Dudley who took the empty house where her body was afterwards found corresponded with Steadman in having a cast in her eye, and several witnesses have sworn to the clothing as having been worn by her when last seen. The contents of the pocket and the stains resembling tar on the dress are also proofs of identity. On the other hand, the hair cannot be identified; some witnesses described Steadman's hair as lighter than that of the corpse. Steadman was a woman of known bad character; both she and Cheenery belonged to the lowest class. The points of special interest appear to us to be the impossibility of identifying a body, except by accidental circumstances, after so short a time as a fortnight; the rapid decomposition in both cases preventing, in the case of the man, the amount of injury received during life being ascertained; the attraction of insects to the injured parts of the murdered man; and the employment of tar to prevent effluvium by the murderer.

DR. TUKE ON THE MAORIS.

There are few Englishmen who do not feel an unpleasant twinge at the notion of another New Zealand war. The man whose conscience lies in his pocket has a latent idea that the war is got up by the English settlers for selfish purposes, and that we shall pay for it and be plundered without recompense. The man of finer feelings is inclined to blush at the probable extermination of a race of men who, if savages, yet possess some qualities which the civilised might imitate with advantage. Everything that adds to our knowledge of these unhappy people is welcome at the present moment, and we should gladly, if it were decent to do so, decant into our columns the entire article called "Medical Notes on New Zealand," contributed to the September number of the

Edinburgh Medical Journal by John Batty Tuke, M.D. We may, however, give a few extracts. The Maoris are disappearing. Most of the causes seem inherent, and not imported.

"The grand cause," says Dr. Tuke, "of the decline of the Maori nation is scrofula, with all its attendant evils,—the melancholy result being apparent to the most casual observer on visiting a native village: at every turn the hacking cough and distressed breathing of phthisis reach the ear; the stain of struma may be seen evidenced by necks scarred, or exhibiting open sores, and the frequent occurrence of strumous ophthalmia; the children are almost invariably pot-bellied and ill-nourished, and teeming with vermin,—the result of neglect and filth. It is a sad fact, but only too true, that fully fifty per cent. of the Maori population show traces of scrofula, manifested in one or other of its varied symptoms."

As for the causes, Dr. Tuke speaks first of the theory that the Maoris are the descendants of a small body of Malay emigrants, who arrived in the Northern island 400 years ago, and that the scrofula is the result of a climate unsuited to them. If this theory held good there could be no such thing as a general peopling of the earth from one centre. The next alleged cause is breeding in and in:—

"That sterility is frequently the result of consanguinity may be deduced from the fact that in many cases where childless women have subsequently formed connexions with Europeans, large and healthy families have resulted. This is so commonly the case that parents will frequently endeavour to give their daughters to white men, mainly for the purpose of rearing to their tribe half-caste children, whom they greatly prize, knowing the benefit to be derived from the infusion of new blood. The concubine in this case does not suffer in social position in the least, but, on the contrary, is invariably eagerly sought after by native men as a *bonâ fide* wife, after she and her European friend find it mutually agreeable to separate. The half-caste is a remarkable improvement on the native stock, and not unfrequently is superior to his European progenitor. He is, of course, lighter in colour than the full blood, and combines in a wonderful degree the best physical features of both parents. His mental faculties are generally supposed to be inferior to either. One thing is certain, all his predilections and instincts are for the mother's race. I say the *mother's* race, as it is very rare indeed (I only know of one instance), for a white woman to cohabit with a Maori man. I have seen half-castes in wrestling throw all native competitors, and treat like infants the strongest and most athletic men selected from a garrison composed of 400 of one of our best regiments. They make good sailors and shearers, and can work hard at anything but continuous labour, although their natural disposition is rather more listless and indolent than the Maori. Quadroons are as pale as Europeans; and the second cross seems to eradicate the Maori blood, as the features become quite European, the manifestations of scrofula are absent, and the disposition tends completely to the European side of the house."

Too early marriage is another cause of sterility. The diet is too much composed of vegetables, vast quantities of which must be taken to appease hunger. Hence dyspepsia and pot-belly. Wounds, however, heal readily:—

"The children about a pa are pot-bellied, and generally present an ill-nourished appearance, subject more or less to diarrhœa or dysentery, frequently in a chronic form. Tabes mesenterica is the cause of at least half the deaths before ten years of age, and its victims present a more than usually revolting appearance. Distressing as the symptoms of this disease are among Europeans, they are infinitely more so in the Maori; the skin, instead of a clear, becomes a dirty dark-brown, more particularly about the abdomen; the eyeballs appear very prominent, and to this is frequently added the red and everted eyelids, devoid of lashes, peculiar to strumous ophthalmia. The native doctors have discovered the benefit of fish-oil in this malady, their great remedy being the constant use of the oily meat of the dog-fish, which often proves beneficial at the earlier stages of the complaint. . . . The houses are generally damp sheds, with the floor often below the outside level, without windows or openings of any sort except a door, which a stout man finds great difficulty in creeping through, and the fire is lighted in the middle of the apartment; the whole habitation is black with the accumulated smoke of years, and the atmosphere is such as but few seasoned white men can endure. Their usual mode of sleeping is in a long low house, called warepuni, where they lie packed as closely as it is possible to do, every chink where a breath of fresh air could possibly enter being carefully closed. The result is, that in half an hour the heat and smell become to a European intolerable, and, as sometimes happens, when a hundred sleep where there is breathing-room for twenty, it is wonderful that the results are not more immediate."

When we add syphilis, drunkenness, and ignorance and superstition in the use of remedies, and scarlet-fever, and other imported epidemics, it scarcely needs war to finish up this people.

THE MEETING OF THE BRITISH ASSOCIATION AT NEWCASTLE.

(SECOND NOTICE.)

(*From our Special Correspondent.*)

I BROUGHT my last letter to a close with the address of Professor Rolleston in the Physiological Section. I shall now proceed to notice the work performed by the other representatives of medicine in the different Sections. It will, I think, be the best plan to take each gentleman separately, and in alphabetical order.

JAMES BIRD, M.D. LONDON,

On the Vital and Sanitary Statistics of our European Army in India compared with those of the French Army under like Conditions of Climate and Locality.

Dr. Bird's paper was read in Section F—Economic Science and Statistics—on Thursday, August 27. After some preliminary and important facts had been stated, it showed that by the latest return of the British army in India, exclusive of the late East India Company's troops, it appears that the deaths in India amounted to 35·3 per 1000, and the invalidacy, with deaths on the passage, home, caused a further loss of 35·3 per 1000, being altogether a decrease of the whole strength of 68·6 per 1000. It was further shown under the above first division of Dr. Bird's paper on the rates of decrement from the effective strength of the British troops serving in India, that invaliding even at home causes a decrease of 32·3 per 1000, while the average death-rate, exclusive of the Horse Artillery, was 14·7; so that this cause of decrement in India is not greatly in excess. In comparing those rates of Indian mortality in the British army with those of French troops, Dr. Bird showed that for their tropical colonies of Martinique, Guadaloupe, Guiana, and Reunion during ten years—1838-47 inclusive—the mortality was 69·5 per 1000; vibrating between 90·4 and 25·3. In Algeria, in an effective strength of 108,000 men for ten years, from 1837 to 1846 inclusive, the death-rate was 78·8 per 1000; and that during 1846 it was 68·8, while the other casualties of discharged, sent to France, killed in battle, deaths in French Hospitals, pensioned, and invalided amounted to 28·3, increasing the total decrements of French troops in Algeria to 97·1 per 1000. The two other heads of Dr. Bird's paper were "The Sanitary Ameliorations of the Sickness and Mortality effected of late years," and "The Sanitary Measures still Necessary for Application to English Troops in India." This last subject was not brought before the Section, not being strictly statistical. Under the head of "amelioration" he showed that, whereas at home, for fifteen years previous to 1854, the average death-rate was 14·7, and that of invalids 32·1 per 1000; those rates respectively in 1860 had fallen to 7·32 and 21·30, evidently a gain to the effective force of 18·38 per 1000. In the hot climates of Jamaica, Ceylon, and Mauritius, where from January, 1830, to March, 1837, the death-rates respectively were 91·49, and 34·6, they had fallen in 1860 to 20·2, 19·6, and 23·8 per 1000, proving beyond doubt that with the introduction into India of improved sanitary appliances, adapted to climate and localities, and with restraints on vice and intemperance, correspondingly decreasing rates of sickness among our troops must follow as natural results.

Dr. Bird's paper gave rise to an animated discussion, in which some of the speakers were opposed to his views. His arguments, however, held their ground, and the paper was much approved.

WILLIAM CAMPS, M.D. LONDON,

On the Sanitary Condition of the Troops in India.

Dr. Camp's paper was read in Section F on Friday, Aug. 28. The author came to the following conclusions:—1. That by far the larger proportion of the mortality and inefficiency in the Indian army has arisen from endemic diseases, and notably from fevers, diarrhœa, dysentery, cholera, and from diseases of the liver. 2. That the predisposition to these diseases is in part attributable to malaria, in conjunction with extremes of temperature, moisture, and variability. 3. But that there are other causes of a very active kind in India connected with stations, barracks, Hospitals, and the habits of the men, of the same nature as those which are known in colder climates to occasion attacks of the very diseases from which the Indian army suffers so severely. On Saturday morning a discussion took place on Dr. Camp's paper, in which Dr. Hunt, Dr. James Bird, and Colonel Sykes took part. The two latter gentlemen were very warm in the debate, Dr. Bird contending that heat, moisture, and bad locality were the great causes of mortality in India, and the latter giving more importance to intemperance and vice.

STEWART CLARKE, M.D.

Ventilation of Barracks and other Public Buildings in India.

Dr. Stewart Clarke's communication on the above-named subject was read by Dr. Embleton. After describing the importance of ventilation, the author tried to show that in India, owing to the high temperature within the buildings, no current of air was established, and that artificial ventilation by means of the fans on the plenum principle is absolutely demanded. A fan apparatus was then explained, designed to effect the perfect ventilation of barracks in India. The whole apparatus is of the most simple kind: it can be erected and kept in perfect working order by any ordinary joiner. The apparatus now in use at the Agra Prison was erected entirely by the prisoners. The first one was constructed for a corridor of sixty-eight cells, and cost about £24 (240 rupees), including the cost of convict labour at the usual rates. Eight men are required to work each blower during twenty-four hours. Supposing the apparatus adjusted for two barracks, each arranged for twenty beds, so that the same blower will do for both, and cost at the usual contract rates £50 (500 rupees), or £1 4s. 9d. (12 rupees 6 annas) per soldier for plant; the cost of working per measure at 7s. (3 rupees 8 annas) per coolie, being £2 16s., or 28 rupees, the total cost per annum for each soldier, including wear and tear, etc., would not exceed £1, or 10 rupees.

JOHN CLELAND, M.D.

On the Ligamentous Action of the Long Muscles in Man and other Animals.

Dr. Cleland, whose careful anatomical researches and thoughtful inferences are frequent subjects of admiration at the meetings of the Association, in the paper named above, and read on Monday, August 31, gave a description of the long muscles in man and other animals. The object of the paper was to show that in the long muscles power was conserved.

The PRESIDENT complimented Dr. Cleland on the manner in which he had treated this difficult subject, and said Nature had here a true law of parsimony, and rarely employed muscular contraction or nerve force if she could accomplish the action by any other means.

JOHN DAVY, M.D., F.R.S., AMBLESIDE,

On the Colour of the Salmon.

Dr. Davy read this Paper in Section D—Zoology—on Thursday, August 27. The point of the paper was that the peculiar colour of the salmon is unconnected with oil or fatty matter, and that it belongs to the coloured muscles after the analogy of the colouring of the muscles of various other animals, as witnessed in the instances which come under our observation in the way of meats. Granting that the colour belongs to the muscular fibre—*i.e.*, that the colouring matter is seated in the muscle irrespectively of fat—the further conclusion is, that it is of an organised kind, it may be, a peculiar colouring matter, nowise essential to the muscle (some of the muscles being without this colour), and analogous to those colouring matters which exist in plants, especially their leaves and flowers, and in the tegumentary parts of mammalia, birds, and fishes, such as the hair of the first, the feather of the second, and the epidermis of the third. Whether the peculiar colour or colouring matter owes its formation to some particular kind of food, or to a special secreting power, there are no well-marked facts to guide to a conclusion. So far as probabilities are concerned, the author was inclined to the common belief that it depends more on the former than on the latter.

The Colour of the Eggs of Birds.

On this subject Dr. Davy drew the following conclusions:—1. As to the colour and markings of eggs. These are very various; the colouring matter is of an organic kind, very similar to that of leaves and flowers, and in part depends on molecular arrangements. 2. That the albumen in quantity greatly exceeds the yolk, but in eggs of different species in no regular manner, whilst in all the quantity of solid matter in the yolk is proportionally much larger than in the white. 3. That the temperature at which the coagulation of the albumen takes place varies in almost every instance, and that the firmness of the coagulum does not appear to be regulated by the proportion of solid matter which the albumen yields in evaporation. 4. That the coagulum of each has an aspect of its own, varying in different instances as to tint, degree, and translucency, and in some varying in colour.

On the Blood in Relation to the question, Is Ammonia one of its Normal Constituents?

The author observed that of the many questions relating to the blood, there were two which have lately occupied much interest—one as to the coagulation of the fluid, whether owing to the escape of ammonia; the other, whether the blood, in its healthy state, contains volatile ammonia? Referring to the first question, he stated his reasons for answering it in the negative. The second question he thought it more difficult to answer. Its solution he had attempted experimentally. The conclusions he arrived at from the varied experiments which he described are the following:—1. That they are confirmatory of the inference that the coagulation of the blood is not owing to the escape of ammonia. 2. That they are favourable to the conclusion that the blood contains a small proportion of ammonia. 3. That the ammonia which is found in respired air and in insensible cutaneous perspiration is derived from the blood, and is yielded in union with carbonic acid. 4. That the proportion of the volatile alkali is greater in venous than in arterial blood. 5. That in the blood of the Batrachians, and of other animals in which the aëration of this fluid is less perfect than in birds and mammalia of higher temperature, the quantity of the alkali is proportionally greater.

Dr. RICHARDSON, in a long and able speech, stated his own views upon the whole subject. He said that since the publication of his work on the coagulation of the blood, he had seen over sixty papers and essays that had been written in relation to his explanation of the cause of coagulation. Up to this moment he had made no reply, first, because he really had little to add to what was said in his book; secondly, because the number of papers that had been written were so great that he had not had time to answer them all; and, thirdly, because he found no pleasure in entering into controversies of a personal kind, such controversies, in his opinion, never leading to a useful result. He would, however, strive briefly to answer one or two of the objections that had been raised. When his theory was first propounded, the objection taken was that ammonia is not a normal constituent of the blood; but step by step, as inquiry was made—for, in truth, the objection had been primarily instituted without inquiry—that statement was withdrawn, and now the existence of ammonia as a normal constituent of blood was generally admitted, as it had just been by Dr. Davy, and by some admitted beyond the degree to which he (the speaker) had himself laid down. It was not necessary therefore for him to enter further on this point, and he would pass to another, viz., the efficiency of ammonia for the purpose required. On this subject Dr. Richardson dwelt with great care, and he illustrated it not only by those arguments with which our readers are familiar, but with other experimental evidences which were entirely new. Thus, he showed that blood to which ammonia had been added seven years ago, and which had remained in the fluid state from that time, underwent perfect coagulation by the mere act of decomposing the ammonia by a current of ozonised air driven through the blood. What answer, he asked, had the vital theory to an experimental fact such as this? In the next part of his argument, Dr. Richardson met some particular objections. He was of opinion that Dr. Davy had lost much in his results, when searching for ammonia in the halitus of blood, by using too small a quantity of blood, and by allowing the blood to be first exposed. As regards the quantity of ammonia liberated, a mistake was often made. The amount of ammonia was compared with the volume or weight of blood, whereas it was the proportion of fibrin in the blood that had to be considered, and which, it should be remembered, was only two parts in the thousand. Now, one grain of ammonia was capable of holding sixteen grains of fibrin in solution in eight thousand grains of blood, and the relation therefore of ammonia to blood was certainly not over one part in eight thousand parts, and as the evolution of ammonia on liberation of blood from the vessels was a process decreasing from the first moment of liberation, results apparently negative were very easily obtained, much more easily than those which were really accurate. Professor Lister's experiments had been adverted to by the President. These were of three classes. One class, when correctly read, were all in favour of the ammonia theory; another class were not fair as experimental tests and inferences; and a third class had no relation to the ammonia theory at all, but had reference to the question of what, in the absence of a better term, might be called the affinity of fibrin for particular substances—a question which had yet to be worked out, and to which he (the speaker) had given much attention. At this stage Dr. Richardson entered into various details respecting the deposit of fibrin on solid bodies. He explained that the deposition was not precisely the same on every substance, that it was more rapid on metals than on ivory, and on ivory than on gutta-percha. As regards ammonia, he said that fibrin was not to be considered as dissolved in the alkali, but as held in distribution by its presence; neither did he think that the affinity, if it could be so called, between the ammonia and the fibrin was intimate in healthy blood; were it so ammonia would not answer the purpose for which it was intended. According to his view, the ammonia distributed through the blood in the most intimately divided form acted as a substantial agent, over which the fibrin was distributed. But when blood was set at liberty the tendency of the ammonia, above a certain temperature, was to diffuse as gas, and then the fibrin was precipitated, or if another substance were introduced into blood, for which the fibrin had greater affinity, it, the fibrin, was precipitated. In illustration, it was shown that if blood freshly drawn were treated and left at rest in contact with ammonia, it would remain fluid; if the ammonia were driven off, it would coagulate; if ozone were driven through so as to decompose the ammonia, it, the blood, would coagulate; and if the ammonia, present in just sufficient quantity to sustain fluidity, were retained, and the blood were agitated with fragments of metal, the fibrin would separate at 60° on the metal, and would condense, forming a coagulation. Obviously, in this latter case, ammonia had played the part of holding the fibrin in distribution, and as obviously the bond between the two bodies had been broken by the interposition of a third body. The same phenomena of course will occur in recently-drawn blood to which no ammonia is added. Dr. Richardson illustrated this important point still further by reference to the effects of saline substances and fixed alkalies. His argument was to this effect: when a saline body, say common salt, is added to blood it holds it fluid, but if water be poured in coagulation takes place; in this case the diffused saline substance by its presence holds the particles of fibrin in diffusion; but if more water be added, *i.e.*, if the salt be too widely distributed the fibrin separates and comes together in the same manner as it does when ammonia, being the solvent, is liberated by evolution as a gas. In the course of his speech, Dr. Richardson adduced a great many other facts and explanations which cleared up various apparent discrepancies, and which tended to confirm the original positions he had taken. In conclusion, he said that he believed his views on the subject had been of service to the practice of Medicine, and he had defended them rather on that ground than from any personal vanity or disposition for argument.

Slacking of Quicklime.

This paper was read in Section B—Chemical Science—on Tuesday, September 1. Dr. Davy, after referring to the conditions in which lime mixed with water formed a hydrate, suggested that, considering the high temperature produced in the act of union of water and lime, and the quantity of steam that might be generated, the formation of the hydrate "might be applied to some useful purpose, such as the blasting of rocks; or, if successful, might be especially useful in collieries as a substitute for gunpowder, which has so often occasioned, by the igniting of gas, terrible accidents and loss of life."

Arthur Donkin, M.D., Newcastle.

On the Physiological Action of the Uterus in Parturition.

Dr. Donkin in this communication, read on Monday, gave his views respecting the part which the uterus plays during labour, and the nature of uterine contraction.

Dennis Embleton, M.D., Newcastle.

Notes on Certain Parts of the Anatomy of a Young Chimpanzee.

Dr. Embleton's paper was the first read on Thursday in the Physiological Section. The skeleton and brain of the dissected Chimpanzee were shown, and casts of the brain, with some beautiful diagrams, showing the muscles, stomach, and colon, were also exhibited. The animal, a male, measured two feet five inches, and was about one and a-half or two years old. It was scantily covered with black hair, except around the muzzle and arms, where the hair was silvery grey. It was fresh and in good condition, the trunk rather bulky, the chest large, the arms strong and muscular. The great toe freely detacted from the others, and resembling a strong thumb, measured with its metatarsal two and a-half inches, the third toe three and a-half inches. The thumb appeared much shorter, slenderer, and weaker than the other fingers, the great toe thicker, stronger, and shorter than the other toes. After an elaborate description of all the organs of the body, Dr. Embleton said that the conclusions arrived at are those which have already and for some time past been made public by Professor Huxley, viz., 1st, that the Chimpanzee is not, properly speaking, quadrumanous, but that it possesses four prehensile extremities, two hands, namely, and two feet; and, 2nd, that the brain of the Chimpanzee differs from the brain of man only in size and weight, therefore, in the smaller size and extent of its cerebral convolutions, the same parts without exception exist in both brains. Whether the cerebral matter of the ape differs from that of man in microscopic characters, or how otherwise it may differ are problems yet to be worked out.

R. Garner, Esq., Stoke-upon-Trent.

On the Reciprocal Action of Plants and Gases.

Mr. Garner, in his paper, read on Monday, August 31, brought forward the subject of the natural inhalations and exhalations of plants, and of the effects on vegetation of certain non-natural contaminations of the atmosphere, such as occur in coal and mining districts, consisting for the most part of sulphurous and hydrochloric acids, and of ammonia. Different plants have different susceptibilities for such influence, and a kind of rudimetrical table may be constructed in which the greater or less impurity of the atmosphere may be shown from the effects on plants. Thus the rhododendron or yucca, or aucuba will flourish in an air fatal to the common laurel; wheat will luxuriate when a holly or oak will die. Annuals suffer least, evergreens much. The paper gave the result of many experiments on plants by means of gases, etc., applied to the leaves and roots. Some plants which appear naturally to luxuriate in the coal strata, as the oak, holly, or some ferns, soon die when the mines began to be worked. Trees lose their leaves earlier than in other districts, and, as a rule, evergreens suffer much. One thing was fortunate, annuals suffer less; for instance, corn and wheat do well when nothing else could, and perhaps the exhalations in question might even tend to ripen them. By restoring the disturbed surface, tempering also the cold days by the same, after calcination, the face of such a district often presented as fair a share of fertility as arable land.

George Gibb, M.D. London.

Report on the Physiological Effects of Bromide of Ammonium.

Dr. Gibb's report was read on Friday in sub-Section D. His conclusions were as follow:—1. In small doses, more or less long-continued, bromide of ammonium acts a tonic and absorbent, and exerts its peculiar properties upon the skin and mucous membrane. 2. It diminishes the weight of the body in polysarcia, causing the absorption of fat when combined with a regulated diet; and this is effected with greater certainty than by any other known substance. 3. It improves the intellectual powers, increases the bodily capacity, and promotes healthy function. 4. Locally it possesses a soothing influence on the mucous membrane, and, according to the strength and mode of its application, so does it diminish sensibility. 5. In large, frequently-repeated doses, or given at intervals, it influences the entire mucous tract; it affects all the special senses, and produces anæsthesia, or impaired sensibility of the various mucous outlets. 6. All the poisonous effects are produced by very large doses, as from the bromide of potassium, but in smaller doses it is more certain and reliable, causes no diarrhœa or diuresis, ncr anaphrodisiasis, and its special properties are exerted sooner and with less inconvenience.

On Voluntary Closure of the Glottis independently of the Act of Breathing.

Dr. Gibb (in his paper which was read on Monday) said, independently of the act of breathing, closure of the glottis was accomplished by temporarily holding the breath, and voluntarily acting upon the muscles of the larynx, and opening and shutting the glottis at pleasure. This action could be seen with the laryngoscope, in a series of experiments which Dr. Gibb had performed upon himself, and they proved that the muscles of the larynx are voluntary, and wholly under the control of the will, in most, if not all individuals.

On the Voluntary Closure of the Glottis independently of the Act of Breathing, and Further Observations on the Normal Position of the Epiglottis.

The author said since the last meeting of the Association much additional experience and more extended observation had induced him to submit some further remarks confirmatory of his former views. Up to the period of his bringing the subject before the Association last year, it was the generally received opinion that the epiglottis in the healthy state was always erect and perpendicular. Its peculiar structure favoured this view. The examination of 300 healthy persons up to the month of October, 1862, showed him that, in a certain percentage, the cartilage was in a semi-pendant, transverse, oblique, or nearly quite horizontal position. This was during passive examination, independently of the act of swallowing, of phonation, or of any motion in the structures of the throat, and carefully observed when the tongue was protruded forward and held outside the mouth. Up to the present time he had examined as many as 680 persons, of various ages and sex, all more or less in perfect health, or nearly approaching to it, and the percentage, curiously enough, remained the same, namely 11; that was to say, 11 persons out of every 100 individuals possess an epiglottis whose position is not erect. From what had been stated, the observer could readily comprehend the striking differences between an erect and a pendant epiglottis, and its importance was of a very high character in everything appertaining to voice and throat, whether in health or disease. This pendant condition of the epiglottis was sometimes congenital, and when it occurred in the young there was great danger to life during their passage through the diseases of childhood, especially those likely to involve the throat.

DR. JUNOD, M.D., GENEVA,

On the Physiological Effect produced by several Apparatus contrived for the Purpose of causing a Vacuum upon the entire Body or upon a Part thereof.

Dr. Junod in this paper, read on Tuesday, September 1, in sub-Section D, described his vacuum apparatus, which consists of a cylinder, which can be made to fit on the body, and exhaust the air, like a large cupping-glass. The apparatus is intended to act instead of leeches, no blood being taken from the body by it. Besides the apparatus for an exhausting effect, Dr. Junod proposed the converse of this remedial influence, namely, compressed air. For this purpose a large air-tight chamber is used, having the form of a diving-bell. The patient is seated within, and air is forced in until the necessary amount of pressure is produced, say of two atmospheres.

CHARLES KIDD, M.D., LONDON,

On How to Restore Drowned Persons, Patients in Chloroform Accidents, etc.

Dr. Kidd's paper was received on Tuesday, September 1, in sub-Section D. It detailed the best methods for restoring animation in the forms of death specified in the title.

WM. MURRAY, M.D., NEWCASTLE,

On the Investigation of Instinctive Actions.

Dr. Murray read his paper in sub-Section D, on Thursday, August 27. He endeavoured to demonstrate the part which each of the sources of nervous power plays in generating those effects, which, in the aggregate, make up an instinctive act or set of actions. The author thought that the instinctive movements of animals, and their nerves or physical construction, do not differ from those of man in kind, but in degree. In man the volitional, as representing reason, abstract deduction, and experience, is immensely superior to the others. As we descend in the social scale we find the emotional, as the originator of the purely and really instinctive movements, become more prominent, and generally carrying the will with it, for we very seldom see an animal going contrary to his instincts. Lower still in the scale we find all the arts necessary to the life of the animal left to the care and control of reflex action. Was there, then, he asked, in animals an intelligence? and his reply was—We strongly incline to the belief that there is, and that it varies in its power with the kind of animal, and manifests its existence by the extent to which it controls the emotional or purely instinctive part of his actions.

THOMAS NUNNELEY, ESQ., LEEDS.

The Calabar Bean.

Mr. Thomas Nunneley in his paper on the "Calabar Bean," read on Tuesday, September 1, in sub-Section D, said very little was known of the bean in this country, or anywhere except in Calabar, where it was retained by the king for his own use to administer to criminals. It was brought to this country, and first investigated by Dr. Christison. It was very difficult to obtain, for the natives parted with it with great reluctance. It was supposed until lately to be only poisonous. Dr. Christison testing it, found at first no unpleasant taste or effects, and was suspicious he had not got the genuine article. In Calabar it was administered to criminals. If the criminal recovered by vomiting or otherwise he was considered guilty or under witchcraft, and sold as a slave, or his life destroyed. If the bean acted as a poison upon him and killed him, it was a proof of his guilt, so that he was guilty and his life sacrificed in either case. Though Dr. Christison found no ill effects at first, in a few days he became utterly prostrate, but through the use of remedies recovered. He made no further experiments upon himself, but he was now actively engaged with Dr. Fraser in experiments to determine what was the active principle in the bean, and no doubt the result would be communicated to them. But during the experiments of Dr. Fraser it was accidentally discovered that when a portion of the extract was placed upon the eye, it had the effect of nearly closing the pupil. They knew that some poisons, belladonna, for instance, dilated the pupil; but they had not before heard of anything that contracted the pupil. The experiments at present were necessarily in very few hands. Dr. Christison had swallowed twelve grains, which nearly destroyed life. Mr. Nunneley described several experiments he had made with dogs, cats, and other small animals, and remarked that these animals seemed—although the poison given to them had no smell, and was mixed with food they liked—to have an instinctive knowledge that it was bad for them, and refused to take it until they were absolutely forced. It produced excessive salivation, and it made the animals very irritable. Mr. Nunneley also detailed the results of several experiments made with a view to discover what was the active principle of the poison, which was not yet determined.

F. W. PAVY, M.D., F.R.S., LONDON,

On the Reason why the Stomach is not Digested by its own Secretion during Life.

Dr. Pavy, in submitting this question to sub-Section D on Friday, August 28, said that the question here raised must be admitted to be one of the utmost interest and importance to us all, because it touches upon the means by which we escape after every meal we consume from the occurrence of an event which would inevitably prove fatal to life. Hunter noticed that the stomach was susceptible of being attacked by the digestive liquid after death, and accounted for its power of resisting destruction during life by reference to the "living principle." The stomach, he says, which at one instant, that is, while possessed of the living principle, was capable of resisting the digestive powers which it contained, the next moment, namely, when deprived of the living principle, is itself capable of being digested. In illustration, he further says, if it were possible for a man's hand to be introduced into the stomach of a living animal and kept there for some considerable time, it would be found that the dissolvent powers of the stomach could have no effect upon it; but if the same hand were separated from the body and introduced into the same stomach, we should then find that the stomach would immediately act upon it." This statement, however, fails to stand the test of actual experiment. Bernard, of Paris, ingeniously contrived to introduce the hind legs of a living frog through a fistulous opening into the interior of a digesting stomach, and found that they underwent digestion, notwithstanding that the life of the animal was maintained. My own experience enables me to testify to the accuracy of this result, and further, I have found that the tip of a living rabbit's ear has similarly yielded to the influence of the digestive menstruum. The "living principle" must therefore be discarded, as insufficient to account for the state of security under which the living stomach exists. To replace the refuted influence of the "living principle," it has been suggested that it is the epithelial lining which gives to the stomach the immunity from destruction it enjoys during life. The stomach, it has been said, is lined with an epithelial layer, and this, with the mucus secreted, acts as a kind of varnish in protecting the deeper parts. Whilst digestion is proceeding, the epithelium and mucus are constantly being dissolved, like the food contained in the stomach; but a fresh supply being as constantly produced, the organ is thereby maintained intact. Death taking place, and the epithelial layer being no longer produced, the gastric juice, after acting upon and dissolving it, reaches the deeper coats, and then, continuing to exert its influence, may ultimately, the temperature being maintained sufficiently favourable for the purpose, occasion a perforation of the organ. This view, however, like Hunter's "living principle," fails to stand when submitted to the test of experiment, for I have found that a considerably-sized patch of mucus membrane may be removed, and food will afterwards be digested without the slightest sign of attack being made upon the deeper coats of the organ. Indeed, it might almost be assumed, upon reflection, that something more constant—that some condition presenting less exposure to the chance of being influenced by external circumstances than that supplied by the existence of an epithelial layer, would be required to account for that unfailing security from *ante mortem* solution which the stomach appears to enjoy. From the articles swallowed, abrasion of the mucous membrane may be presumed to have been not unfrequently produced, and ulceration is not of so uncommon an occurrence; yet perforation has not been observed as the necessary result. The problem, therefore, as to why the stomach is not susceptible of attack during life as it is after death still remains open for solution, and the view that I have to offer refers the immunity observed to the circulation within the walls of the organ of an alkaline current of blood. It will not be disputed that the presence of acidity is one of the necessary circumstances for the accomplishment of gastric digestion. Now, alkalinity is a constant character of the blood, and, as during life the walls of the stomach are everywhere permeated by a current of this alkaline blood, we have here an opposing influence, the effect of which would be to destroy, by neutralising its acidity, the solvent properties of the digestive fluid tending to penetrate and act upon the texture of the organ. The blood being stagnant after death, the opposing influence is lost that is offered by the circulating current. Should life happen to be cut short at a period of digestion, there is only the neutralising power of the blood actually contained in the vessels of the stomach to impede the progress of attack upon the organ itself; and the consequence is, that digestion of its parietes proceeds, as long as the temperature remains favourable for the process, and the solvent power of the digestive liquid is unexhausted. There is, therefore, no want of harmony between the effect that occurs after death and the explanation that refers the protection afforded during life to the neutralising influence of the circulation. In support of this view, I have found, experimentally, that by arresting the flow of blood through the stomach during life, the organ is placed in the same condition as it is after death; having lost its protecting influence, digestion of its texture now proceeds. It will be naturally required of me to reconcile the view advanced with the effect that is noticed when the living frog's legs and rabbit's ear were introduced through a fistulous opening into the digesting stomach. If the circulation, through its neutralising power, protect the stomach, why should it not have afforded equal protection to the tissues of the living animals introduced through a fistulous opening into the organ. According to the proposition offered, the result is involved in a question of degree of power between two opposing influences. And because through degree of vascularity the neutralising power of the circulation is sufficient to hold in check the solvent action of the gastric juice in the case of the walls of the stomach, it does not follow that it should similarly be sufficient to do so in the case of the frog's legs and rabbit's ear. With the frog it may be fairly taken that the amount of blood possessed by the animal would be totally inadequate to furnish the required means of resistance to the influence of the acidity of a dog's gastric juice. With the rabbit's ear the vasculaity is so much less than that of the walls of the stomach that there is nothing incomprehensible in the fact of the one yielding to, and the other resisting the attack. In support of the position that has been taken, it can be shown by experiment that even with the stomach itself, by increasing the acidity of its contents beyond a certain point, its circulation is no longer adequate to enable it to resist digestion.

REVIEWS.

A Manual of Zoology. By M. Milne Edwards. Translated from the last French Edition by R. Knox, M.D., F.R.S.E. Second Edition, with many Additional Observations, and Illustrated by 572 Highly-finished Wood Engravings. Edited by C. Carter Blake, F.G.S., etc., etc. London: H. Renshaw, 356, Strand. Pp. 564. 1863.

Milne Edwards's "Manual of Zoology" had long been in use in France as the authorised text-book of zoology in the course of natural history sanctioned by the Council of Public Instruction of France. It had passed through seven editions in its native country when the late Dr. Knox translated and introduced it to English use, adding to it many interesting notes in his own pungent style. So well received was Dr. Knox's translation, that an edition of 3500 copies was soon distributed, and a second edition of it was in progress when Dr. Knox was suddenly removed by death. His unfinished task was committed by the publisher to the hands of Mr. C. Carter Blake, who has executed it with the greatest care and good taste.

The mere announcement of such a book is sufficient, as it needs no commendation. We may say briefly that it begins with a clear and popular, though accurate account of the structure and functions of the various organs of which animals consist, and then that it classifies and enumerates the existing animal kingdom, and gives a *resumé*, in order, from highest to lowest of the leading classes, orders, and genera. It is interspersed with many original notes by the lamented translator, and is throughout illustrated by an abundance of well-executed woodcuts. Altogether it is a most valuable introduction to Physiology and Zoology, whether for Medical students or for persons who study these sciences as parts of a liberal education.

Die Erste Ausrettung Eines Polypen in der Kehlkopfshöhle, durch Ferschneiden ohne blutige Eröffnung der Luftwege; nebst einer kurzen Anleitung zur Laryngoscopie. Von Victor V. Bruns, Professor der Chirurgie in Tübingen, etc.

The First Extirpation of a Polypus in the Larynx by means of Incision, without Instrumental Opening of the Air-passages; with a Brief Introduction to Laryngoscopy. By Victor V. Bruns, Professor of Surgery in Tübingen, etc. With 32 illustrations.

Dr. Bruns, moved by fraternal affection as well as Professional zeal,—for the patient was his brother,—bestowed upon the treatment of the interesting case which he here records the most patient and unsparing pains. He had, indeed, his own path to strike out, for until then no case of extraction of a polypus through the aid of laryncoscopy had been performed, or at least recorded. And it is therefore no discredit to Dr. Bruns to say that his pamphlet has lost some of its interest now that these cases have ceased to be novel. The pear-shaped growth was attached by a narrow pedicle to the left vocal cord near its anterior insertion, and by a fold of membrane along the larger part of its length; it rose and fell with the respiration, and occasioned great and increasing inconvenience in the form of hoarseness, cough, and impeded breathing, for which many remedies had been tried in vain for upwards of two years. The plan of treatment adopted by

Dr. V. Bruns was that of making several small incisions in the growth, repeated on four successive days, under the influence of which it shrivelled up, and so far disappeared as to be scarcely discernible. The recovery was perfect. The instruments employed are described and figured. To the report of the case is appended a clear and detailed description of the art of laryngoscopy, and of the method of illumination Dr. V. Bruns prefers, which consists of an oil lamp provided with a reflector, and with a disc introduced into the centre of the hollow flame, by which the air is made to mingle more freely with the burning vapour. He places the reflector neither before one eye nor on the forehead, but, by means of a frontal band and a stem, in front of the nose, below the eyes. A cut, in which this position is illustrated, presents a less remarkable appearance than might have been imagined.

PROGRESS OF MEDICAL SCIENCE.

Selections from Foreign Journals.

ON THE TREATMENT OF DIARRHŒA AND DYSENTERY.

By Professor SKODA.

Beyond everything stands a strict regulation of the diet. When the intestinal canal is in a diseased state almost any substance introduced into the stomach acts mischievously, and it is not infrequently necessary to suspend all food until the intestine is in a condition to bear it. Every solid article *eo ipso* is then mischievous, but even fluids, by reason of their temperature, may act as prejudicially. In most cases taking a few spoonfuls of warm soup, or drinking a mouthful of cold water will immediately be followed by severe colics, and soon afterwards by evacuations. We must only allow lukewarm soups or other drinks, and that only by a spoonful at a time. Of course, these stringent rules only apply to very obstinate diarrhœa, and especially dysentery, for there are many cases of temporary diarrhœa in which the patients continue to eat fruits and the like, and still soon get well. Such cases must, however, not be taken into account, and it is always most prudent at the commencement of a diarrhœa to cut off the supply of food as far as possible, and at all events to prohibit all articles likely to augment the affection.

Opium is the most valuable medicine in diarrhœa, for it keeps the sphincter in a state of permanent contraction, a contraction which is often propagated to the large intestine, and the small intestine is unable to propel its contents far enough to induce the irritation which causes their expulsion. When, by reason of this contraction, these contents are retained, their amount may become considerably diminished by the absorption of the fluid. Frequently, however, there is no spot of the canal which is not so diseased as to prevent such absorption taking place, and then the diarrhœa will continue in spite of the opium and of the contraction of the sphincters. It appears, moreover, that opium, besides its action on the muscular portion of the canal, exerts, by contact, a soothing effect upon the mucous membrane. In consequence of the diminution of the irritation of this membrane, its secretion is probably lessened, as are possibly those of the liver and pancreas. However this may be, opium acts very favourably in profuse secretion from the intestinal mucous membrane. From half a grain to three grains may be given in the twenty-four hours, the best preparation being the *ext. opii aquosum*.

If opium or morphia do not suffice, it must be aided by astringent remedies, by far the best of which, and the most easily supported, is the sulphas zinci. One would have supposed that tannin in its separate state would have proved more useful than the zinc, but this is not the case, and it is much less easily borne. It acts much better and more energetically when employed as a household remedy (*e.g.*, as a decoction of sloe or wild pear tree) than in its separated form; and is then of great service in practice among the poor. Alum is of no use whatever in diarrhœa. Lead approaches zinc in efficacy, but still it is less certain than it. The dose should not be greater than a quarter of a grain, and this may be repeated every two or three hours, and at most every hour. If these means do not suffice, we must have recourse to enemata of salep or starch (with which may be combined one grain of opium or half a grain of zinc) not throwing up more than two ounces at a time. If the clyster does not cause pain in the rectum, and the disease continues obstinate, the dose of the zinc may be increased to two grains. Tannin may be added to the enema, but the zinc is far more serviceable. In the most obstinate cases we must have recourse to cauterisation; but this is only the case when there is a diseased condition of the lower part of the rectum. Very obstinate cases of blenorrhœa confined to the anus may be completely cured by the application of nitrate of silver in substance as high as it can be passed. The injection of a strong solution of this substance does not usually attain the same end.—*Wien Allgem. Med. Zeit.*, 1862, No. 43.

EXCERPTA MINORA.

Diagnosis of Oblique Inguinal Hernia.—The Surgeon-General of the United States calls attention to a class of cases which have been brought under his notice as establishing disability from Medical service with pension, but which fail to do this. A soldier presents himself with a tumour in the groin, which he declares to be a rupture, but, on examination, an apparent tumour is found existing on each side, having a conoidal shape, and extending from the neighbourhood of the anterior superior spinous process to the spine of the pubis, the apex being downwards. At first sight, a double inguinal hernia does seem to exist; but when the patient coughs the protuberances seem largely inflated, the bands of the fibres of the abdominal muscles being distinctly marked; and although the apparent tumours descend to the external abdominal rings, the fingers when placed in the rings are not sensible of a hernia, and when the coughing ceases, the protuberances return to their former condition or disappear. The appearance is due to an unusual thinness of the aponeuroses of the external oblique and the fascia superficialis and integuments, or undue development of the fibres of the internal oblique that arise from the anterior part of the crest, and anterior superior spinous process of the ilium and from Poupart's ligament.—*Amer. Med. Times*, July 18.

Transportation of Compound Fractures of the Leg.—Dr. Swinburn states that the plan he has adopted with entire success is placing compresses made of straw, hay, leaves, husks, or even sand-bags between the legs and thighs. After drawing the broken limb down to its normal length, he applies the compresses, and fastens it to the sound one by means of a bandage cast slightly over both, thereby making a splint of the sound limb. So arranged, the patient may be removed or handled with less injury and inconvenience than by any other mode.—*American Medical Times*, July 18.

FOREIGN CORRESPONDENCE.

ITALY.

Florence, August.

Cases of poisoning with the tips of lucifer matches being of not unfrequent occurrence in England, it may be interesting to your readers to have an account of the analytical methods followed in such cases by the chemists of this country. Some months ago, Signor Passerini, of Pisa, was commissioned to analyse the contents of a stomach. He found on its inner surface, and also at the cardiac end of the œsophagus, several dark patches, surrounded with a ring of congested capillaries, the mucous membrane on and around these patches being entirely destroyed. Close to the cardia he found some small corpuscles of a dark colour, which were carefully collected, washed, and dried. They were sufficiently hard to resist the pressure of the finger, but yielded to the pressure of a glass spatula. When placed on a piece of burning charcoal, they emitted the smell of sulphurous acid, and in the dark the flame looked like that of burning sulphur. On the other hand, when rubbed on paper a faint phosphorescence and a smell as of garlick was perceived. On being boiled with liquor potassæ, the dark corpuscles partly dissolved, leaving a black deposit, seemingly pure carbon, at the bottom of the test-tube. Pure nitric acid was then added in excess, and the aperture of the tube covered with paper steeped in a solution of diacetate of lead, whereupon the alkaline liquid became milky, from the precipitation of sulphur, and the paper lid was partly blackened by the formation of sulphide of lead.

These results, Signor Passerini justly remarked, would have sufficed to show the presence of both sulphur and phosphorus. Nevertheless, he performed some more experiments, in order to be doubly sure. Firstly, the corpuscles in question were boiled with nitric acid, the liquid diluted with water, and filtered. The addition of a solution of chloride of barium in excess then produced a white precipitate of sulphate of baryta; and a further addition of ammonia to the remainder of the liquid previously filtered produced a precipitate of phosphate of baryta. Secondly, another portion of the corpuscles was first reduced to powder, and then deflagrated with three times its weight of nitrate of potassa. The residue was dissolved in distilled water, and to this solution, previously acidulated with a little muriatic acid, some magnesia and ammonia were added, which brought about a slow precipitation of the double phosphate of magnesia and ammonia, recognisable by the form of its crystals.

On another occasion, the *corpus delicti* was a brass spoon, with some streaks of black matter adhering to it. This matter having been softened a little by immersion in a small quantity of distilled water, was carefully scraped off with a glass spatula, and then boiled with part of the water which had been used to soften it. The retort soon became filled with a dense white vapour, and the garlick smell of this vapour, as well as its phosphorescence in the dark, did not leave any doubt about the presence of phosphorus. According to Signor Passerini, phosphorescence, however trifling the quantity of phosphorus experimented upon may be, is always easily to be perceived without the aid of any complicated apparatus, the surest means to exhibit it being to boil it in a glass retort.

A curious and apparently successful clinical experiment has recently been made by a country doctor residing in a small borough in the Tuscan Maremma, where miliary fever, although it is almost endemical there, had all of a sudden become particularly virulent. Seeing the utter uselessness of the ordinary treatment, Dr. Ginaneschi bethought himself of trying vaccination, and, to his own surprise, was completely successful in ten cases. In two other cases he failed, but these hardly weaken his argument, considering that in both of them vaccination had been resorted to too late, viz., on the eighth day of the fever in one, and only three hours before death in another case. Now this Tuscan miliary fever is a subject which should not be mentioned without commentary. Tuscany is probably the only country in the world where miliary fever plays such an important part; and even here it was not reputed to be more formidable or more frequent than elsewhere, until Professor Bufalini, a celebrated clinical teacher of this city, discovered and preached, some thirty years ago, the existence of the "miliary principle" in a great number of acute diseases, especially inflammatory and congestive fevers with a tendency to becoming malignant. According to his doctrine, the elimination of this miliary ferment was rarely critical, but its retention or sudden disappearance always portended evil. This naturally involved the possibility of a latent state of miliary affection; an idea, the introduction of which has proved mischievous, by making the class of miliary diseases preposterously extensive and elastic. In fact, it has come to this pass, that there are only few persons who die within the boundaries of quondam Tuscany of anything else but "miliaria." I asked a young woman the other day what her mother had died of? "Miliaria," was the ready reply. She soon, however, added that her mother had been consumptive during life. I may almost say that, to die of miliaria means, in common parlance, to die of an acute affection with or without a miliary eruption. But if there is any disease more especially identified with miliaria, it is malignant pleurisy; and for the lower classes the expressions "miliaria" and "*mal di petto*" are synonymous, and used *promiscuè*. The Medical men, on the other hand, have no objection to lessening the weight of their responsibility by so convenient a diagnosis. And the ultimate effect of all this is a popular belief in the ubiquity of the miliary virus, a belief not confined to a particular district or climate—such as the sea-shore, or the marsh-lands, or the hills—but common to the whole of Tuscany, or, in other words, to all those places where Bufalini's disciples have been practising medicine. No wonder, then, if foreign sceptics have sneered at this theory, which, whatever its own merit may be, has no doubt led to great popular errors, and has created unnecessary bugbears for the lower classes. Nevertheless, it is impossible to deny the brilliancy of Signor Bufalini's idea. And, after all, it is just as possible that the extra-Tuscan would be wrong to ignore the existence of what is called "miliary principle," as that the Florentine Professor should have been wrong in pointing it out. All one may safely aver is, that Bufalini's disciples have unduly generalised their master's idea, and that therefore all their reasoning on this matter should be accepted with a certain reserve, considering that the word "miliaria" is even by Professional men sometimes applied to cases of so-called latent miliary eruption.

Dr. Ginaneschi draws particular attention to the importance of the urine as a prognostic sign in this disease. Whenever a sudden discoloration of the urine takes place in miliary fever, death is sure to follow in a few hours—nay, often in fifteen minutes. But as a retention of urea alone, or of uro-pigment, would hardly be sufficient to bring on such acute and intense poisoning of the blood, the miliary virus itself must be considered as being capable of extraordinary virulence, and nothing short of a direct and specific treatment with another virus *sui generis*, as antidote, is likely to destroy or to neutralise it. Such an antidote Dr. Ginaneschi pretends having found in the vaccine lymph, provided it be inoculated during the first twenty-four hours after the attack of the fever. In the ten cases mentioned by him the pustules appeared promptly; but he does not state whether his patients had been previously vaccinated. With the lymph of one of these pustules he vaccinated three healthy children who had not yet been vaccinated, but in none of them did the vaccination succeed. This would go far to show that the vaccine virus, while destroying the miliary virus, had itself been acted upon and modified by the latter, thus becoming unfit for further propagation.

REPORTS OF SOCIETIES.

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OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 1, 1863.

Dr. OLDHAM, President, in the Chair.

DR. ED. E. DAY was elected Fellow of the Society.

A CASE OF FIBROID TUMOUR SITUATED IN THE ANTERIOR WALL OF THE UTERUS, WHICH OBSTRUCTED LABOUR.

Dr. BARNES exhibited the uterus of a woman who had died soon after labour from the effects of ruptured bladder. The labour had been obstructed, and there had been retention of urine for many hours. The patient had been attended by an unqualified Practitioner. The cause of the obstruction to the delivery and of the retention of urine was a fibroid tumour situated in the anterior wall of the uterus near the cervix, which had been driven down by the child's head and jammed against the symphysis pubis, closing the urethra. Dr. Barnes observed that in the decidual *débris* taken at a distance from the seat of the placenta he had in this case found atrophied remains of the chorion villi, which had not been wanted for the formation of placenta.

Dr. Barnes also exhibited a stereoscopic photograph representing a child in whom hydrocephalus co-existed with spina bifida. The child was a year old. The hydrocephalus only became developed at the age of nine months. Dr. Barnes cited this case as an illustration of the views of Mr. Hutchinson, who regarded spina bifida as due to an affection of the spinal arachnoid, similar to the disease of the cerebral arachnoid which resulted in hydrocephalus, and not as a malformation dependent upon arrest of vertebral development.

Dr. Barnes likewise exhibited a stereoscopic photograph of a child's head remarkably distorted in consequence of delivery by face presentation. The occipital region was flattened in, whilst the forehead was enormously raised and projected. Dr. Barnes observed that such cases illustrated the mechanism of face presentation, and remarked that, although the deformity would quickly disappear in a great measure, yet that some degree of the peculiar moulding imparted to the head by the mode of birth would probably remain in after life. In like manner, the sugar-loaf occipital elongation resulting from the common mode of birth was not unfrequently retained in adult age.

A paper, by Mr. R. S. TOMLINSON, was read on a

CASE OF TUBERCULOSIS OF THE UTERUS.

The case related, which was one of very unusual occurrence, was that of a lady aged 55, who had been suffering from a profuse uterine discharge upwards of two years. The discharge was of a dirty-brown colour, without smell. The uterus was found to be enlarged, but no conclusion could be formed as to the nature of the disease. She died fifteen months afterwards. The uterus was found enlarged, and the cavity of the organ was filled with tubercular masses; the Fallopian tubes were enlarged, and similarly affected. The inner surface of the uterus presented, on removal of the tuberculous masses, a honeycomb appearance.

Dr. **Oldham** remarked that he had seen at least six cases of uterine phthisis. The disease appeared to attack the cavity almost always, and he had usually found the uterus to be of small size. In one case, however, he had seen the organ enlarged, and the patient died of tubercle elsewhere.

A paper, by Dr. **Charles Clay**, of Manchester, was read on

THE USE OF WIRE LOOPS, HORSE-SHOE WIRES, ETC., FOR CORRECTING ANTE- AND RETRO-VERSION, OBLIQUITY, AND PROLAPSE OF THE UNIMPREGNATED UTERUS.

The author, in this paper, endeavours to point out the positive injury done by the use of the generality of pessaries, particularly the old class, which, on account of their cheapness, are still sanctioned by the Profession. Improved stem pessaries are shown to be so expensive as to be little applicable to the extent of the evil for which they are proposed. In order to meet this difficulty, the author proposes a new and very simple series of instruments suitable for various malpositions of the uterus, ante- and retro-version, obliquity, and prolapse, and at a cost so extremely small as to favour their general application. These instruments are made of medium-sized copper wire, bent and soldered in a convenient form, and tinned.

Dr. **Graily Hewitt** believed that in the majority of cases of retroflexion of the uterus a mechanical treatment was not applicable; but that in a few cases, on the other hand, such mechanical treatment was required, and in which a cure of the distortion was possible. He had been in the habit of using an instrument, with the results of the action of which he was perfectly satisfied. It consisted of a stem of ivory the length of the uterine cavity, and straight; this stem was mounted on a globular air pessary. The air pessary, when distended with air, maintained the stem in the uterus, and prevented it slipping out. The instrument in question was less liable than others, he believed, to injure the uterus.

Dr. **Routh** said the use of internal pessaries for retroversion was always a hazardous expedient, sometimes giving rise to serious and even fatal results. Dr. Hewitt's instrument he believed to be very ingeniously contrived; but even this failed sometimes to give relief. Dr. Simpson's was very efficient; but that also produced occasionally serious results. One drawback in this and in Dr. Hewitt's was that the stem in utero was too long, and irritated especially the fundus uteri. This part once inflamed, was accompanied with far more distressing as well as severe consequences to health. Moreover, it was chiefly due to this fundal endometritis that retroverted womb gave annoyance at all. In the absence of this fundal inflammation, many patients went about with retroverted wombs without inconvenience. Hence one advantage of using short-stemmed pessaries, by which all further irritation at the fundus was avoided. The reason of this distress to patients was obvious. That part of the uterus was supplied by nerves from the renal plexus, and not the inferior aortic, and was therefore in direct nervous relation with the splanchnic nerves and semilunar ganglia superiorly, and with the ovaries (also supplied from the same sources) inferiorly. Hence the greater general discomfort. Moreover, Dr. Simpson's instrument fixed the uterus *in situ*, and so every jerk of the body was felt by the uterus. Dr. Hewitt's instrument was likewise too long in the stem, though this might be remedied; but although it admitted considerable freedom of movement of uterus, it was sometimes forcibly ejected by the uterus, because not always firmly secured inferiorly. To meet these difficulties, he (Dr. Routh) had devised a modification. His instrument could sometimes be borne where others were not tolerated. It consisted of a coiled wire bell-spring, covered with caoutchouc, and at about two inches or less from its upper end separated by a gutta-percha disc from the lower portion. Upon the disc, with the coiled wire within the organ, the uterus rested, while the lower end was secured by tapes or a napkin from ejection. By means of a sound to which the curve of the retroverted uterus was previously given, and then passed within the coil, it might be easily applied. The spring, once the organ was replaced, would by its elasticity maintain the organ *in situ*, while it would not impede full movement of the uterus with the movements of the body. Of course the instrument should not be used till after all inflammation had subsided, under the use of leeches or other local depletion, aperients, etc. Sometimes the use of sponge tents to reduce the uterine volume, after Dr. Moir's plan, was also of great use as a previous measure.

Dr. **Greenhalgh** stated that among the patients at St. Bartholomew's Hospital and in private practice he found misplacements of the uterus extremely common, and productive of considerable distress both in their complicated and occasionally in their uncomplicated forms. In prolapsus and procidentia he strongly recommended the cautious use of a modified Zwanke's pessary, which possessed the advantages of forming a floor upon which the uterus could rest, and took off all tension from the ligamentous supports of the uterus, enabling them to recover their tone; while astringent injections could be thrown into the vagina, with a view of constringing the dilated and relaxed parts forming the floor of the pelvis. In retroversions and retroflexions he had used a great variety of mechanical contrivances, both intra-uterine and vaginal, but he was compelled to admit with little or no benefit. He entirely concurred with most practitioners that all intra-uterine supports should be done away with, on account of the irritation and inflammation thereby occasioned, which had too frequently led to fatal results. The plan he at present pursued in such cases was, first, to remove all complications, when possible, by appropriate local and general treatment, and then from time to time to replace the uterus by means of the finger or uterine sound, and in some few cases to introduce sponge tents into the neck of the uterus; thus he had succeeded occasionally in rectifying the faulty position of the uterus, after which, in a small proportion of cases, impregnation had followed.

Dr. **Barnes** said, in reference to the treatment of retroflexion of the uterus, that he regarded the subject as one of great importance. He had seen severe distress, mental as well as physical, produced by this form of uterine displacement. The treatment was difficult, and not always successful. He had occasionally, by the adaptation of various forms of pessary he had constructed for special cases, however, succeeded in relieving this complaint. With reference to prolapsus uteri, he could not understand how anyone largely engaged in the treatment of uterine disease could ignore the value of pessaries if these were constructed on sound principles. It was important to distinguish the varieties of prolapsus. There was one class which occurred in women who had passed the child-bearing age, in which the prolapsus depended upon atrophy of the uterus and absorption of the fat and other tissues, which in younger women padded the pelvis and helped to keep the pelvic organs *in situ*. Wanting this support, the uterus was apt to fall through under straining from cough or from labour. This form he called prolapsus from senile atrophy. It was so purely a mechanical disorder that it required mechanical means as a substitute for the natural support that was lost. Nothing answered so well here as a pessary. The form he used had a small cup, which received the uterine neck; this cup was supported on a curved stem so small as not in any way to disturb the vagina, which on the contrary, was able to grasp the stem and almost to support the pessary by itself. The end of the stem was, however, suspended by elastic bands to an abdominal belt. This elastic support enabled the uterus and pessary to move freely, as in the natural condition, under the various movements of the body. This form of pessary he understood had been in use at King's College Hospital. In a vast majority of cases it answered admirably. He had never less than a hundred women under his care wearing this instrument. It gave complete relief, and enabled them to follow even laborious occupations with comfort. In another class of cases occurring during the child-bearing period, and commonly dependent on inflammation or congestion with enlargement of the uterine neck caused by delivery, pessaries were not so useful. It was often found that the prolapsus was cured by removing the uterine engorgement which caused it. But even here there were cases in which the support and rest afforded by the pessary he had described were of essential service in removing the congestion and inflammation. When the uterine neck was prolapsed, the circulation of the blood was mechanically retarded. When the uterus was replaced, the vessels being restored to their natural position, the circulation was freed, congestion and œdema disappeared, the bulk and weight of the organ diminished, and the vagina, being enabled to contract around the stem of the pessary, gradually recovered its tone; and thus the pessary might fairly be said to cure the prolapsus. The value of the stem-pessary in procuring "rest" for the prolapsed uterus, complicated with œdema and engorgement, was, he felt satisfied, not sufficiently appreciated. But the pessary must be well constructed on the principle he had described. The balls, still too often used, which acted only by stretching the vagina and filling the pelvis, only made matters worse, and were the most absurd and mischievous contrivances.

Dr. **Oldham**, being asked by some of the Fellows to give the results of his experience as to the use of pessaries generally, stated that he rejected them; he had tried them all, but had come finally to confine his mechanical treatment to the employment of simple external support by means of a well-arranged pad and bandage, and that only in very bad cases; the internal treatment consisting in the use of the cold douche, and attention to the state of the general health. In very many cases constipation was a troublesome complication. Small doses of aperients were most efficacious; out-door exercise, especially horseback exercise, was most valuable.

A paper, by Dr. **William Martyn**, was read on a

CASE OF DIFFICULT LABOUR—DELIVERY BY FORCEPS—RETENTION OF URINE AND SUBSEQUENT SLOUGHING OF LINING OF BLADDER.

Mrs. H., in labour at full time, her fourth confinement. I was called in to assist in her delivery on April 17, at seven p.m. Sharp pains began the night before, the liquor amnii having escaped three or four days. For the last seven hours the pains had been violent and incessant, without satisfactory progress. The forehead of the child presented, the face looking towards the right sacro-iliac joint. I found the brim of the pelvis small and round; meconium appeared in the discharges; the patient was much exhausted. We at once determined to deliver by forceps. After drawing off the water, I brought down the child (full size), dead, in twenty minutes; head much disfigured, and the occiput forced back between the shoulders. The patient was now doing well. Her first labour was at seven months; child born dead. The second, at full time, was very severe; child killed by the labour. At the third, a male child at full time was born alive, after a very hard labour. In each of these cases the face was said to present. April 22.—Four days after delivery I was again called in. The patient was very ill, not expected to live; she was fevered, exhausted, and very restless; complained of much pain in her belly; vaginal discharges offensive. On inquiring if she had passed water, I learned that it had dribbled away for some time, but she had passed none naturally since her labour. Her belly was very full and tender; pulse very quick. I drew off fully five pints of bloody, highly ammoniacal urine; the room stank with it. For eight days the catheter was required twice a day; the urine became putrid-like, and was loaded with dirty offensive matter. There was much pain and distress about the bladder. May 6.—Constant irritation and distress in her bladder; no control over it; the urine dribbled away. 17th.—She could not pass any urine except by drops. Lumps of thick offensive matter escaped by the urethra from time to time. 19th.—Again she could not pass urine; she was often upon her knees making great efforts to do so. I found a portion of slough hanging out of the urethra, which I drew out easily; it was not a large piece. In the evening more appeared, which the patient drew out of the urethra; it was followed by a gush of offensive urine. The slough appeared to be the whole lining of the bladder, and consisted of mucous and sub-mucous tissue, some muscular fibres, and a patch about the size of a half-crown, with the appearance of a peritoneal surface; the mucous surface had some grit of phosphates upon it. The slough measured eight inches by five or six. (This specimen was exhibited to the Society.) Such a specimen had been shown by Mr. Spencer Wells under similar circumstances, when it was doubted whether it was human bladder tissue at all, as reported in the *Transactions* of the Society. The patient has recovered, but the bladder is irritable; she cannot retain urine more than an hour or so. My opinion is that the urine, in being long retained, becomes sufficiently ammoniacal to produce the well-known caustic effects of ammonia on the animal tissues, and hence all the results; the mucous lining, in fact, becomes blistered and destroyed by the changed urine. The catheter then is the efficient means to prevent such a destructive process in every case.

A paper, by Dr. **Gustavus Murray**, was read on a

CASE OF ASCITES, WITH OVARIAN DISEASE.

The subject of this case was a young woman, twenty-eight years of age, married, but without family. She was admitted into the Great Northern Hospital, and was tapped on June 12, when thirty-three pints of fluid (ascitic) were drawn off. She refilled in the course of three days, and was again relieved by the wound giving way; but, nevertheless, she still rapidly continued to fill, and died on the 27th from peritonitis, which set in on the fifth day after tapping. Post-mortem examination disclosed an ovarian, multilocular, solid tumour, weighing six pounds. It was firmly bound down in the cavity of the pelvis, but capable of easy and complete removal. Dr. Murray found that the trocar had pierced one of the upper cysts of the tumour, which contained a thick, creamy fluid, and thought it likely that this coming in contact with the peritoneum acted as an irritant, and gave rise to the inflammation which proved fatal. The state of the patient on her admission to the Hospital was such that it was considered better to tap first, and endeavour to improve her general health, which had not been good for eighteen months, before proceeding to do ovariotomy. The author brought this case before the Society as one showing the fatal result of tapping; whereas, even in her emaciated condition, he believed that, had ovariotomy been performed, the case might have done well.

MEDICAL NEWS.

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Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, September 3, 1863:—

Pryce Lloyd Davies, Abergele, Denbighshire; Thomas Thompson Thirsk, Yorkshire.

The following gentleman also on the same day passed his First Examination:—

William Yates, Westminster Hospital.

List of the Candidates who were successful at the Competitive Examination at Chelsea Hospital, on August 10 last:—

C. J. Atkins; J. Y. Beattie; Jas. Barker; F. A. Byrne; J. E. Barker; R. H. Bolton; J. Barry; R. Cunynghame; C. M. D. Cuffe; E. H. Condon; H. C. Collier; J. P. Delmege; F. Dick; W. Elgee; R. W. Forsayeth; Geo. Fearon; V. Gouldsbury; J. R. Greenhill; H. R. Greene; C. Haines; F. Howard; W. R. Kynsey; R. W. Lawless; P. P. Lyons; H Morris; A. F. Preston; J. A. Shaw; W. P. Smith; A. W. Troup; A. Thomson; A. Turner; C. J. Weir; and Thos. White.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Albert, George P., M.R.C.S. Eng., has been appointed Resident Surgeon and Apothecary to the Western General Dispensary, Marylebone-road.

Bournes, William H., M.D., Q.U.I., has been appointed Surgeon to the Ballycastle Dispensary District, Killaloe Union.

Broster, John, M.D. Edin., has been appointed one of the Acting Medical Officers to the Southampton Dispensary.

Ferguson, George, M.B. Lond., has been elected Surgeon to the Islington Dispensary.

M'Carthy, E., M.R.C.S. Eng., has been elected Resident Medical Officer to the Tower Hamlets Dispensary.

Orrock, James, L.R.C.S. Edin., has been appointed Surgeon-Dentist to the Leicester Infirmary.

Scott, W. H., M.R.C.S. Eng., has been elected Surgeon to the Islington Dispensary, Upper-street.

White, J. G., M.R.C.S. Eng., has been appointed Resident Surgeon to the Leith Hospital.

Wilders, John St. S., M.R.C.S. Eng., has been elected Assistant-Surgeon to the Queen's Hospital, Birmingham.

DEATHS.

Christie, Dr. R., at Paris, Upper Canada, on July 18, aged 37.

Clarke, Charles, M.R.C.S. Eng., at Rathdrum, Co. Wicklow, on May 11.

Hooper, Henry S., L.R.C.S. Edin., at Doune, Perthshire, on August 1, aged 49.

McKellar, Donald, L.F.P.S. Glasg., at Glendarnel, Cairndow, Argyllshire, on August 14.

Morris, Thomas J., M.R.C.S.I., at Akyab, East Indies, on July 9, aged 26.

Nivison, James F., L.R.C.S. Edin., at Melville-street, Portobello, Edinburgh, on August 3, aged 68.

Pidcock, John, M.D. Aberd., at the Briars, Watford, on September 5, aged 91.

Simpson, John, M.B., at Pagoda Island, Foo-chow, China, on July 6, aged 28.

Skerrett, Peter J., M.D. Edin., at Ann-street, Birmingham, on August 28.

Thomas, David, M.R.C.S. Eng., at Queenstown, Ireland, on August 22, aged 51, Surgeon H.M.S. *Hawke*.

The Indian Medical Service.—The following paragraph is from *Allen's Indian Mail:*—"We understand that the long-talked-of Medical amalgamation arrangement will not take place after all. The authorities at the Horse Guards seem to have set their face against it. In its stead it is proposed to have a staff corps, which is to be regulated on much the same principles as the general line as regards promotion—that is to say, promotion to go by length of service. The length of service from the rank of Assistant-Surgeon to that of Surgeon is fixed at twelve years. The higher appointments are to be filled by selection. Pensions on retirement on account of ill-health, it is said, will be considerably improved, but pensions on full pay will be much the same as before. Officers in the present service will be eligible for the staff corps. Salaries are to be consolidated. We just jot down these memoranda as the heads of the gossip that has reached us. If these arrangements are carried into effect many Assistant-Surgeons—perhaps an average of twenty—will obtain promotion at the several presidencies."

Pharmaceutical Conference. — The opportunity afforded by the meeting of the British Association at Newcastle has been embraced by several influential pharmaceutists for holding a conference. This meeting was held at Baker's Hotel, on Wednesday, September 2, Mr. Deane, F.L.S., in the chair, when the organisation of an association was completed, with a view to the following objects, viz.:—The advancement of pharmaceutical science by the allotment amongst its members of subjects especially deemed to merit inquiry; the check of sophistication in medicine by the operations of a committee upon adulterations; and the union of existing provincial societies having allied objects. It was felt by the promoters of the conference that the material advance in the education of pharmaceutists consequent upon the labours of the Pharmaceutical Society for the last twenty years, rendered it incumbent upon those who had enjoyed its facilities for professional study, to make more systematic efforts in the cultivation of pharmacy. A cordial and joint invitation from Bath and Bristol to hold a conference at the former city next year was read and accepted. At an evening sitting communications were read upon "Metric Weights and Measures" and "Adulterations," which gave rise to general discussion.

Faculty of Physicians and Surgeons, Glasgow.—Medical Officers of the Channel Fleet.—On the evening of Saturday, the 5th inst., this ancient corporation had the pleasure of entertaining at dinner, in their hall, St. Vincent-street, the Medical officers of the Channel Fleet, on their visit to the Clyde. Flag-Surgeon Sloggett, Surgeons Jack of the *Royal Oak*, Wells of the *Warrior*, Speer of the *Liverpool*, Scott of the *Resistance*, Courtney of the *Defence*, Comrie of the *Edgar*, along with Assistant-Surgeons Jones and Dr. Hains, were present. Staff-Surgeon Lewins, and Surgeon Leitch, of the 41st Regiment, now in Glasgow, were also present. The President, Dr. Ritchie, who was in the chair, in addition to the guests of the evening, was supported by Professors Rainy, Pagan, and Easton; and the Visitor, Dr. J. G. Fleming, who was croupier, by Professor Gairdner, and by former Presidents, Dr. A. D. Anderson, Dr. Hunter, and Dr. Lyon. A large number of the other Fellows of Faculty were present at dinner. After the usual loyal and patriotic toasts had been drunk, "The Medical Department of the Navy" was given by the President, and that of "The Army" by the Croupier, in appropriate speeches. The existing high efficiency of the Medical Department of the Navy, and the improved position of naval Surgeons, was favourably contrasted with their past condition in former periods, and to them was accorded the credit of having achieved, through many difficulties, so much for the sanitary welfare of the service. It is not often that the Medical officers of the public services have an opportunity of meeting with a collective body of their professional brethren engaged in civil practice; and really on this occasion all present seemed to have much pleasure and gratification from the cordial and kind interchange of friendly feelings and sentiments which took place throughout the evening.

The Discovery of the Bodies of Children in Whitechapel Church.—The recent discovery of a dead body of a child in the roof of Whitechapel church by some workmen engaged in repairing it, has led to a search throughout the roof, resulting in the finding of eleven coffins, three of which contained bodies of children. Two of the children are supposed to have been still-born. It is not apparent how the third child came by its death. In addition to these remains, several skulls of children were found. There were some bones and dust and the remains of clothing. A cap was on the head of one of the bodies, and napkins were also lying among the remains. A post-mortem examination is to be made previous to an inquest by Mr. Humphreys. It would seem as if the object had been to place the remains in a consecrated building without paying the burial fees. This could only have been done, we suppose, by the connivance of the sexton. We lately remarked on the frequency of the discovery of the bodies of still-born children in the parks and other public places. Many of them are wrongly believed to have been murdered. They are simply thrown away to avoid the expense of burial. The occurrence in Whitechapel probably belongs to the same class.

Unwholesome Food.—The new Act of Parliament passed on the day of the prorogation to give additional powers for the enforcement of the Nuisances Removal Act of 1855, recites that the provisions of the Act cited with regard to the inspection and seizure of diseased and unwholesome meat are defective, and that it is expedient that the same should be repealed, and that other and more effectual provisions in that behalf should be substituted. The Act declares that the Medical Officer of Health or Inspector of Nuisances may at all reasonable times inspect and examine any animal carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, or flour exposed for sale, or deposited in any place for the purpose of sale, or of preparation for sale, and intended for the food of man, the proof that the same was not exposed or deposited for such purpose resting with the party charged. In case any such food appear to him to be diseased, or unsound, or unwholesome, it shall be lawful for him to seize the same, or cause it to be seized and carried away by any officer, servant, or assistant, in order to have the same dealt with by a justice; and if it shall appear to the justice that any such animal, or any of the articles mentioned is diseased, or unsound, or unwholesome, or unfit for food, he shall order the same to be destroyed, or so disposed of as to prevent such animal or article from being exposed for sale, or used for such food; and the person to whom such animal or article belongs, or did belong at the time of the sale or exposure for sale, or in whose possession, or on whose premises the same is found, shall on conviction be liable to a penalty not exceeding £20 for every animal or article so found; or at the discretion of the justice, without the infliction of a fine, to imprisonment in the common gaol or House of Correction for a term of not more than three calendar months. In case any person shall in any manner prevent such Medical Officer of Health or Inspector of Nuisances from entering any slaughterhouse or building where such food is kept for sale, or shall in any manner obstruct or impede him or his servant or assistant when duly engaged in carrying the provisions of this Act into execution, such person shall be liable to a penalty not exceeding £5. The Act and the Nuisances Removal Act for England (1855) are to be read and construed together as one Act.

BOOKS RECEIVED.

Dictionary of Chemistry. By Henry Watts, B.A. Part VII. London: Longman and Co. 1863.

⁂ The first number of the second volume. About sixty pages are devoted to "Copper, and its Compounds," and an equal space to an exhaustive article on "Crystallography."

Special Therapeutics: an Investigation into the Treatment of Acute and Chronic Diseases by the Application of Water, the Hot Air Bath, and Inhalation. By J. C. Lory Marsh, M.D. London: J. W. Davies. 1863. Pp. 132.

⁂ The first fault which is obvious in this work is that its title is no guide to its contents. What are special therapeutics? In what respect does a "special" thing differ from one that is not "special?" We presume that the author considers that any plan of treatment is "special" which is unusual, or not in common or in sufficient use. The "special" remedies of which he treats are cold water, or hot water, used as outward applications, the hot air bath, and inhalation. As for the use of heat and cold to the skin, the author does not seem to be well posted up on the subject, or to be aware that these remedies have long been in use by well-informed Practitioners. He even speaks of the inunction of oil into the skin in phthisis, and other diseases of atrophy, as if it were a modern discovery. The chapter on "Inhalation" is very crude.

NOTES, QUERIES, AND REPLIES.

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He that questioneth much shall learn much.—*Bacon.*

Godfather's Cordial, M.D.—Will our correspondent send us the handbills to which he refers?

F.R.S.—A full account of all the Sectional Meetings of the British Association at Newcastle, is contained in the *Social Science Review* of last week.

In consequence of the press of matter in our columns the notice of Miss Nightingale's work is postponed.

Raphides, Sphæraphides, and Sphæraphid Tissue of Phanerogamia.—Crystal Prisms of Iridaceæ.—It is by no means to collegiate or metropolitan precincts that the means of research on the recondite operations of nature are confined. Here is the seemingly limited, but really wide, subject of Raphides opened up in a way that may suggest interesting and useful occupation in remote districts of the country. Mr. Gulliver, in a paper of which we can only give a brief abstract, confines the word raphides to its original import, the acicular crystals commonly appearing in bundles as an essential part of the growing and healthy plant. After showing that the presence or absence of these raphides affords the most simple and universal diagnostic between certain closely allied orders, he remarks that further observations are required to determine what may be the value, in this respect, of Sphæraphides and Sphæraphid tissue. These two last terms are now employed to distinguish objects hitherto most inconveniently included under the word raphides. Whenever either the chemical composition or the figure of the crystals can be clearly defined, a satisfactory designation follows as a matter of course; but this often cannot be done, especially with those very minute forms which occur most frequently. The sphæraphides are widely distributed throughout phanerogamia, and occur as a more or less globular congeries or aggregation of minute crystals, either naked or surrounded by a cell-wall. They are usually scattered irregularly throughout the tissue of the leaves and sepals, but are often so regularly and beautifully dotted within the cells beneath the cuticle as to constitute what is here called sphæraphid tissue, and of which good examples occur in Lythraceæ, Geraniaceæ, and several other orders. A figure of sphæraphid tissue is given from the calyx of Lythrum Salicaria. The crystal prisms are larger than true raphides, and, instead of occurring in bundles, are commonly single or in pairs. They are beautiful objects, very common in Iridaceæ, and would be useful for experiments on the refraction, decomposition, and polarisation of light. The common, showy, garden favourite (Iris Germanica) abounds in fine examples of these prisms, so that observations thereon will henceforth be at all seasons easily within the reach even of persons confined to cottage gardens.—*Ann. Nat. Hist.*, September, 1863.

Physical Characteristics of the Americans.—If gay dresses could make a gay season, no doubt the fair dwellers at Saratoga would turn this summer into a carnival. Something bewitching there is, too, about this American sex. The complexion, if not always rich, is clear, and the hair is glossy and profuse. Thin arms and sharpish shoulders are to be met now and then on a close inspection, in spite of the prodigious amount of broiled chickens, mashed potatoes, corn, and squash consumed by these active charmers at their three or four hotel meals. Plumpness, high blood, roundness of form, not even all the virtues of the world-renowned Congress water can impart where Nature has denied; but the dresses are full and flowing, and the hair falls down like a stream of gold from the highly-jewelled combs. The figures, though thin, are often elegant, and the girls in their teens have rows of pearls of dazzling whiteness, the consciousness of which keeps their giggling faculties on a perpetual stretch. . . . The men look worn and dispirited; many of them, doubtless, out of health, have come to this place to recruit it. But, on the whole, at no time of the year, in no part of the States, do you see anything like very robust and blooming health in this American continent. The complexion, which is only pale in the women, is generally dingy and sallow in the men. An eminent statesman, to whom I communicated my impressions about the unwashed look of the Northern soldiery, assured me that the men were "clean enough for Americans." "It is the peculiarity of the Anglo-Saxon blood, as affected by this climate," he said, "to assume a dirty, earthy look. Under the slightest exertion," he added, "the taint of innate biliousness comes to the surface. This is the climate which blended the copper hues of our wild Indian, and its tendency is no less to deepen the milk and rose of the white into an ashy and leaden mixture than to blanch the ebony of the negro into a faded and sickly walnut brown. Our extremes of heat and cold are equally unfriendly to the genuine colour of primitive races." "*Grattez le Russe et vous trouvez le Tartare,*" is a saying which I have heard a diplomatist apply to this country, saying, "Scratch the Yankee and you will find the Red Indian." The tendency of the American face, after several generations, is, in the opinion of this distinguished foreigner, "to assume the elongated shape, the high cheek bones, the deep-set eyes of the savage who originally lorded it over this continent. The cold-blooded courage, the wiry muscular strength, the impassive look, the unwearied power of endurance, are also Indian attributes; nor is there wanting that truculent resolve, that unsparing vindictiveness, that contempt for human life which forbids the Indian to come to terms with an enemy, and which makes the extermination of an adversary a matter of cold, calculating policy." I am amused as I look about me, tutored by so shrewd an observer, by gazing into the countenance of every man I meet, and indulging those physiognomical speculations to which every man is more or less consciously addicted from earliest childhood. There is certainly something striking about the prevailing American type. That long, lank, fleshless form, that straight hair, that stoop in the shoulders, that colourless face, those by no means bad yet somewhat harsh features, that high but flat brow, those pale, thin, compressed lips, that sad yet shrewd and coldly humorous expression, remind you at every step of that complex yet distinct original which the great Nova-Scotian stereotyped in Sam Slick.—*Times Correspondent, Saratoga.*

The Iodide of Mercury in Syphilis.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your Journal of August 1, in Notes, Queries, etc., on the treatment of syphilis, there is a form for making the iodide of mercury. I should feel obliged for the dose given, and whether it has been continued for any length of time. I am, &c. A Student.

Death following Subcutaneous Injection of a Nævus.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—May I be permitted to suggest, with reference to the case of death following the subcutaneous injection of a nævus, reported by Mr. Carter in last week's *Medical Times and Gazette*, that the cause of death in this particular instance was the injection of air into the enlarged veins of the nævus, the outlet of which probably communicated directly with the jugular, and had nothing to do with the action of the irritant fluid. It is a well-known plan to kill horses or oxen to open the jugular and blow in air through a quill, death being instantaneous, and, as Mr. Carter says that "the piston stuck fast, and then yielded with a kind of jerk," I think that the probability of death being caused in the manner I have suggested is increased. I am, &c.

Bowness, September 7. Geo. K. Poole, H.M.I.M.S.

The Bitton District of the Keynsham Union.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I received yesterday the following letter from Mr. Oxford, Clerk to the Keynsham Board of Guardians.

The Bittern District comprises an area of 5000 acres, with a population of 3,050, chiefly coal-miners and labourers, in fact, it is essentially a poor neighbourhood. The nearest point from my own residence is two miles, and the salary paid by the Guardians is £40 a-year, which includes all extras except midwifery. From 1852 to 1855 the district was held by no less than five Medical men. I was appointed Medical officer in 1855, and during that time I have secured the full confidence of the poor and the ratepayers. About eighteen months ago a change was made in the construction of the Board, and since then the most frivolous charges have been brought against me, and it has now culminated in an attempt to eject me from office. Whether this attempt will prove abortive depends upon the gentlemanly feeling of my Professional brethren. They have now an opportunity of proving the *esprit de corps* of our Profession; but, on the other hand, if they lend themselves to a system of oppression, they must expect in turn to be treated with contumely. I am, &c.

Keynsham, September 9. Jno. Lodge.

P.S.—I have been Medical officer to the Keynsham District for nearly nine years.

"Keynsham, Sept. 8, 1863.

"Dear Sir,—I am directed by the Board of Guardians to inform you that as the time for which you hold the office of Medical officer of Bitton district will expire on the 29th instant, it is their intention previous to filling up the appointment to advertise the vacancy in the public newspapers, and that the election to the office will take place on Tuesday, the 22nd instant. "I am, dear Sir, yours truly,

"John Lodge, Esq. "Thos. Oxford, Clerk."

Army Medical Reform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I think one need not search far in order to find a remedy for the present unsettled state of the Army Medical Department if the opinion be well-founded that an insufficient reward for their labour is the real source of the grievances of its officers. It must of course be acknowledged that the various Professions—law, physic, arms, divinity, etc.—are not, and do not admit of being rewarded entirely alike. The divine does not receive the Victoria cross, nor a soldier the silk gown, nor a Physician the Field-Marshal's baton. But whilst each profession has its own peculiar rewards, to each a greater or less amount of pecuniary gain is absolutely indispensable, and the following are the circumstances which, according to our greatest authority,(a) make up for a small pecuniary gain and counterbalance a great one:—1. The agreeableness or disagreeableness of the employment. 2. The ease and cheapness or the difficulty and expense of learning it. 3. The constancy or inconstancy of employment. 4. The small or great trust which must be reposed in him who exercises it. 5. The probability or improbability of success.

Now the occupation of the Army Medical officer is arduous, dangerous to life, and, in too many respects, most disagreeable. The learning of his profession is attended with much difficulty and great expense. The trust, or, as it is more commonly called, the responsibility, imposed upon him is excessive, and his probability of success is extremely small. Consequently, the Medical officer has only the constancy of his employment to make up for any deficiency of pecuniary emolument. Has he, then, a large income? On the contrary, his income is exceedingly small. The pay of the Assistant-Surgeon of ten years' service does not exceed £240 a-year, and his expenses are enormous in comparison with it. Is it reasonable to expect Professional men between thirty and forty years of age to feel contented with such a slender income and with so little honorary reward to make up for it? No. The Medical officers of the army must be better paid; and I would suggest as the best and most economical means of effecting this object—1. The abolition of the ranks of Surgeon-Major and Assistant-Surgeon, leaving only Inspectors and Surgeons. 2. A quinquennial increase in the rate of pay of these latter, the pay being thus rendered proportionate to their length of service.

(a) Adam Smith, "Wealth of Nations."

By these means the highly objectionable relations of Surgeon and Assistant-Surgeon between Medical men supposed to be equal in attainments, and having equal responsibilities, would also be entirely abolished, with all their attendant evils of "confidential reports" and the like, and as there would be no promotion except from the rank of Surgeon to that of Inspector, the inducement to enter the service would, *cœteris paribus*, be as great in one year as in another. *Cœteris paribus*, be it well understood, because "Honour makes a great part of the reward of all honourable professions, whilst disgrace has the contrary effect."(b).

I am, &c. **Senex.**

A Philosopher in Search of Health—The Illness of the late Mr. Buckle.

(From a Correspondent.)

Fever, as a disease, causes a larger rate of mortality than any other acute malady. While it spares no age, that form denominated typhoid is particularly prone to attack those from whose comparative youth and vigour we might augur a long life. While an epidemic of typhus is the penalty paid for starvation, dirt, and overcrowding of the poor during cold seasons, typhoid seems to have an intimate connexion with defective sewage during the heat of summer and succeeding autumn, and often prevails as a local epidemic in the households of the rich. It would appear, too, to be the fever *par excellence* of warm climates, and to be there often compounded of an intermittent, engrafted upon it by the products of malarious elements.

Our nation has only recently had to mourn the loss of one of the ablest and best princes that she ever possessed, and the sable robes have only been laid aside in the Royal Household upon the occasion of the marriage of our future king. Knowing, as we do, that for the prevalence of these diseases there is required a concurrence of antecedents—acknowledging, as we must do, that a plurality of causes or conditions are essential to the generation and spread of the fever poison, we may hope to be able to guard against the recurrence of those widespread epidemics which have afflicted us in past years. Where the links are many in the chain of causation, we ought to be able to arrest the progress of these disorders by severing the continuity of the chain.

From past observation we have empirically learned that typhoid fever is prone to appear after hot and dry summers. The present season has been such as would appear favourable to the origin and prevalence of this disease; and it has been stated that enteric diseases—typhoid fever among them—have been very prevalent of late in Paris; whether more widely so than during previous seasons does not appear, for the great continental cities enjoy a rather unenviable and morbid notoriety in this respect.

It is not so much with the subject of the causes of fever that we would now speak, as of its symptoms, and we have been led to this from the perusal of a paper in the August number of *Frazer's Magazine*, upon the late Mr. Buckle, by a fellow-traveller. We confess that we were pained by that paper; we confess that we think it had better never have been written. Spite of the delicacy with which the subject has been handled—spite of the evident desire upon the part of the writer to render a just and truthful account of his intercourse with Mr. Buckle—we conceive the inferences which flow from many of the statements in it can but be hurtful, and ofttimes unfair, to the reputation and memory of a man whose untimely loss the public generally, and the members of the Medical Profession in particular, must deplore. Who can determine "how much Mr. Buckle's intellectual views were influenced by his moral disposition, and how much the expression of that disposition was influenced by his intellectual views?" We do not endorse all Mr. Buckle has said; we believe that an absence of the feeling of the awful mystery of this world, and of the lives of the beings upon it, a want of the realisation of earthly insignificances contrasted with heavenly magnificences, a deficient sympathy with man's highest aspirations, which always have, and always will pierce the crust of material laws, were fundamental defects in the late Mr. Buckle's mind, and we could have prognosticated, had we not read it, that an appreciation of music would have been absent in him. Mr. Buckle himself seemed constrained to admit, in the Church of the Holy Sepulchre, after the celebration of Good Friday, "that for the truly great historian the sympathetic insight of the poet was requisite, as well as the analytic insight of the philosopher."

Allowing all this to the full, there remain the great intellect, the marvellous erudition and energy of the man! Of his work it may be said, that we behold the ruins of a glorious superstructure, raised by the hand of genius, and wrecked by the greatness of its own power and the grasp of its ambition.

What we purpose doing, however, is to inquire how much of Mr. Buckle's shortcomings and defects of character can be explained by a reference to his early education, his mode of life, and the state of his health. Buckle was never in a public school. He never studied the characters of men at any university, nor does he appear ever to have mingled much with his fellow beings; hence the loss of a spirit which not the acquaintance with every law by which this earth is governed can compensate. Buckle was essentially a recluse and a student. He was something far more than a bookworm, yet he was a bookworm. There is nothing more certain than that physical is as requisite as mental culture to the due adjustment and exercise of our mental and moral faculties. What such men as Buckle gain in depth they lose in freshness. The observations of Plutarch were applicable to Buckle if to any man. "Should the body sue the mind before a court of judicature for damages, it would be found that the mind would prove to have been a ruinous tenant to its landlord."

It was when this ruinous tenant had well nigh demolished the edifice, that Buckle went abroad in search of health. Now, he was physically incapable of all the fatigue and excitement which a journey to the East entailed upon him—far better would it be for such men to seek perfect mental repose in some of the beautiful lake districts of our country. His physical weakness and depressed nervous system had engendered a nervousness, irritability, lack of courage and self-control approaching effeminacy, such as the Physician daily witnesses in persons with a system broken down by overwork and prolonged mental tension. This state of body and mind rendered Mr. Buckle an easy prey to the disease which soon came upon him.

There can be little doubt that when he was attacked with diarrhœa in April, it was the first symptom of that disease which was to have so melancholy an ending—death preceded by delirium and three days' stupor—death, not from typhus, but typhoid fever.

There is frequently a remarkable tolerance and latency of the symptoms until a late stage of the disorder. During its progress the patient may not be so ill as to be unfitted at once for his ordinary duties, and under the influence of excitement he may continue to bear up against his feelings of illness. This fever, moreover, is prone to curious changes and variations in its symptoms from day to day, which would be still more marked if there were a malarious element present in it. Disordered sleep, with a feeling of fear and alarm at slight causes, are common psychical phenomena. Without any actual delirium, the mind is disordered, and the resolution of the brave man becomes exchanged for pusillanimity, as if the mind took cognisance of the shadows of impending ills Our soldiers in the Crimea were often in reality labouring under typhoid fever, instead of the mere diarrhœa they supposed.

These facts should be borne in mind, and the article upon the late Mr. Buckle, to which we have referred, should be read by the light of their teaching. The mixture of strength and weakness, greatness and narrowness, that makes up each man's character, is indeed opposed to the whole spirit of "hero-worship," and ought to lead us to think leniently as well as justly of the author of the "History of Civilisation in England."

COMMUNICATIONS have been received from—

Dr. W. H. O. Sankey; Godfather's Cordial, M.D., L.R.C.P.; University of London; Senex; Professor Struthers; Mr. R. Reynolds; Dr. G. K. Poole; The Director-General of the Army Medical Department; Mr. W. Copney; Mr. C. W. Heaton; Dr. W. B. Carpenter.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 5, 1863.

BIRTHS.

Births of Boys, 925; Girls, 938; Total, 1863.
Average of 10 corresponding weeks, 1853-62, 1664·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	629	603	1232
Average of the ten years 1853-62	654·1	646·4	1300·5
Average corrected to increased population..	..	..	..
Deaths of people above 90	1	..	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	2	..	9	3	8	4	14
North ..	618,210	9	1	26	5	9	9	26
Central ..	378,058	3	2	15	2	4	4	18
East	571,158	8	2	38	2	3	17	30
South ..	773,175	7	2	39	2	10	10	35
Total.. ..	2,803,989	29	7	127	14	27	44	123

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·700 in.
Mean temperature	57·8°
Highest point of thermometer	72·1
Lowest point of thermometer	45·2
Mean dew-point temperature	50·0
General direction of wind	S.W.
Whole amount of rain in the week	0·71 in.

APPOINTMENTS FOR THE WEEK.

September 12. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

14. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

15. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

16. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

17. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

18. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

(b) Adam Smith.

Hogg's Supercarbonated Lithia Water, LITHIA POTASH, and LITHIA AMMONIA.

"Mr. HOGG'S LITHIA WATER is always uniform, and contains the proportion of 2 and 5 grains of Pure Carbonate of Lithia; it is highly carbonated, very agreeable, and we can confidently recommend it to the Profession as an elegant and carefully prepared Mineral Water."—Medical Times and Gazette, November 9, 1861.

CITRATE of LITHIA and POTASH WATER, containing 4 grs. Citrate Lithia, and 30 Citrate Potash; CITRATE of POTASH and IRON, 30 grs. and 5 grs.; CITRATE of POTASH, 30 grs.; BICARBONATE of POTASH, 20 grs.; SODA, 15 grs; SELTZER and VICHY, from their respective analyses.

HOGG, Pharmaceutical Chemist to the Queen, 9, Albion-pl., Hyde-pk.-sq.

Barth's Patent Oxygenated Water is, by a peculiar process, made to hold oxygen in solution, and effervesces with an excess of this gas. It is tonic, gently stimulates the functional action of the stomach and secretory organs, and is found to be very useful as a beverage, and also in the invalid's chamber.

Price 4s. per doz. half pints (fl. ℥x).

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Aerated Lithia Water. — Messrs. BLAKE, SANDFORD, and BLAKE are prepared to supply the LITHIA WATERS (of which they were the original manufacturers under Dr. GARROD's instruction) of any strength prescribed by the Profession for special cases. Those in constant use contain 2 grains and 5 grains in each bottle, either by itself, or combined with BICARBONATE of POTASH or PHOSPHATE of AMMONIA.

The following Waters as usual:—Potash, containing 18 grains of the Bicarbonate in each bottle; Citrate of Potash, 30 grains; Soda, 15 grains; Ammonia, 10 grains; Seltzer and Vichy from their respective analyses; and a very delicious, as well as useful, MINERAL ACID WATER.

BLAKE, SANDFORD & BLAKE, Pharmaceutical Chemists, 47, Piccadilly.

Royal German Spa, Brighton.— STRUVE'S MINERAL WATERS, under Her Majesty's especial patronage. STRUVE'S PUMP-ROOM, BRIGHTON, offering every facility for a course of Mineral Waters as perfect and beneficial as the natural springs, is now open for the 39th Season, and will close in November. The Bottled Waters are sold at the Pump Room, and by GEORGE WAUGH and CO., Pharmaceutical Chemist to the Queen, 177, Regent-street, London, W., and by other respectable houses in London and the provincial towns, where a prospectus, with the highest Medical testimonials, may be obtained gratis.

CAUTION.—Owing to the use of Struve's Bottles by other parties, please to observe that Struve's name is on the label and red ink stamp affixed to every bottle of Struve's manufacture.

Pepsine, and Pepsine Wine.—M. BOUDAULT begs to state that he cannot be answerable for the purity and strength of any Preparation sold under his name unless obtained from his sole Agent, Mr. PETER SQUIRE, Her Majesty's Chemist, 277, Oxford-street, London, to whom all applications respecting it must be addressed.

Third Edition of Boudault on "Pepsine," with further Remarks by Dr. Corvisart, Physician in Ordinary to the Emperor of the French. Price 6d. Edited by W. S. SQUIRE, Ph.D., published by J. Churchill and Sons. May be had also of the Author, 277, Oxford-street, London.

Pepsine Wine.— Prepared from the GASTRIC JUICE of the CALF'S STOMACH.

The process for this preparation is founded upon the observations of Dr. Ellis and others, that good white wine forms an excellent menstruum for Pepsine. Instead, however, of digesting the calf's stomach in the wine, as recommended by Dr. Ellis, the Pepsine is eliminated, and then in the pure state dissolved in the menstruum. Thus prepared, it is an agreeable, slightly acidulous wine, which retains its activity unimpaired, and a teaspoonful of which contains a dose of Pepsine in a form that will be palatable to the most delicate stomach.

The MEDICINAL PEPSINE, or POUDRE NUTRIMENTATIVE, in which the Pepsine, mixed with starch, is reduced to the dry state, as introduced by Dr. Corvisart, of Paris, is still prepared according to the original process, its administration in this form being sometimes found advantageous.

These preparations are manufactured with the greatest care from perfectly fresh gastric juice.

Also the following important Medicines:—

Pepsine Porci.
Podophylline.
Leptandrine.
Tincture of Veratrum Viride (Dr. Cutter's).
Oxalate and other Salts of Cerium.
Carbonate and Citrate of Lithia.
Salts of Morphia.
Pyrophosphate of Iron.
Hypophosphites of Soda, Lime, &c.
Citrate of Iron and Quinine.
Citrate of Iron and Strychnine.
Compound Syrup of Codeine.
Codeine Cough Lozenges.
Crystallised Bromide and Iodide of Sodium.

And the following Granular Effervescent Preparations:—

Bromide Ammonium.
Nitrate Cerium.
Citrate Cinchonine.
,, ,, and Iron.
Carbonate Iron.
Citrate ,,
,, ,, and Quinine.
Iodide ,,
Citrate Magnesia.
,, Quinine.
Citro-Tartrate Soda.
Iodide Sodium.
Vichy Salts.
Carbonate Lithia.
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TO THE MEDICAL PROFESSION.

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See *Medical Times and Gazette*, March 29, 1862, and other Medical Journals. Price 4s. 6d. per lb.

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RECOMMENDATIONS
OF THE
GENERAL MEDICAL COUNCIL,
IN REFERENCE TO
GENERAL AND PROFESSIONAL EDUCATION,
As Amended in 1863.

I.—General Education and Examination.

The Medical Council are of opinion that it is desirable—

1. That all Students pass an Examination in General Education before they commence their Professional studies.

2. That the time of commencing Professional studies shall be understood to be the time of commencing studies at a Medical School, and that no Qualifying Body be held to have complied with the recommendation of the Council which shall allow the Examination in General Education to be passed after the commencement of Professional study.

3. That, as far as may be practicable, Testimonials of Proficiency granted by the National Educational Bodies, according to the following list, be accepted, with such modifications as the Medical Council may from time to time think proper to make:—

1. A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council.
2. Oxford Responsions or Moderations.
3. Cambridge Previous Examinations.
4. Matriculation Examination of the University of London.
5. Oxford Middle Class Examinations (Senior).
6. Cambridge Middle Class Examinations (Senior).
7. Durham Middle Class Examinations (Senior).
8. Durham Examinations for Students in Arts in their second and first years.
9. Durham Registration Examination for Medical Students.
10. Dublin University Entrance Examination.
11. Queen's University, Ireland, two years' Arts' course for the Diploma of Licentiate in Arts.
12. Preliminary Examinations at the end of A.B. course.
13. Middle Class Examinations.
14. Matriculation Examinations.
15. First Class Certificate of the College of Preceptors.
16. "Testamur" granted by Codrington College, Barbadoes.
17. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a Certificate that the Student has been examined in Latin and Mathematics.

4. That the Examination in General Education be eventually left entirely to the Examining Boards of the National Educational Bodies recognised by the Medical Council.

5. That no Certificate of Proficiency in General Education which does not affirm the Proficiency of the Candidate in Latin be deemed a sufficient proof of Preliminary Education previous to the commencement of Professional studies.

6. That Students who cannot produce any of the Testimonials referred to in the Third Resolution be required to pass an Examination in Arts, established by any of the Bodies named in Schedule (A) of the Medical Act, and approved by the General Council, provided that such Examination be in every case conducted by a Special Board of Examiners in Arts.

7. That without professing to lay down any complete scheme of General Education for persons intending to become members of the Medical Profession, the Committee recommend that the scheme of Examination in Arts of the Licensing Bodies be, as nearly as practicable, similar to that of any of the National Educational Bodies above specified.

8. That after October 1, 1861, all Medical Students be required to be Registered.

9. That the Lists of Students Registered be closed within fifteen days after the commencement of each Session or Term.

10. That no Student beginning Professional Study after September, 1861, be Registered, who has not passed an Arts Examination, in conformity with Resolutions 3 or 6.

11. That the several Bodies in Schedule (A) of the Medical Act, either jointly or severally, open a Register for Students commencing their studies in Medicine.

12. That after January, 1863, all Junior Middle Class Examinations be excluded from the List.

13. That the said Register be opened on the first day of each Session or Term, and remain open for fifteen days; and that within seven days after its close the Officer in charge transmit a duly authenticated copy thereof to the Registrar of the Branch Council of that division of the United Kingdom to which the Body or Bodies belong.

14. That the Registrar of the Branch Council lay the Copy of the said Register before the Branch Council, in order that the Branch Council may take whatever steps may seem necessary to secure its accuracy; and that it be thereafter transmitted, with any remarks by the Branch Council thereon, to the Executive Committee.

15. That the Licensing Bodies shall have power to admit exceptions as to the time of Registration, if satisfactory to them, and transmit Lists of such exceptions to the Branch Council of the part of the United Kingdom in which such exceptions shall have been granted, with the grounds stated.

16. That the various Educational and Licensing Bodies be requested to transmit to the Registrar of the General Council Returns, embodying any alterations which they may from time to time introduce into their Courses of General Study and Examinations, which qualify for the Registration of Medical Students; and that a Copy of such Returns be sent by the Registrar, as soon as convenient, to each Member of the General Council.

II.—Professional Education.

17. That the age of twenty-one be the earliest age at which any Professional Licence shall be obtained.

18. That four years of Professional Study be required after the Examination in General Education.

III.—Professional Examinations.

19. That the Professional Examinations be divided into at least two distinct parts; that the first be not undergone until after the termination of two years of Study; and the final Examination not until after the termination of four years of Study.

20. That the first Professional Examination be conducted partly in writing and partly *viva voce;* and that such parts as admit of it be made as practical and demonstrative as possible.

21. That the second Examination be conducted partly in writing, partly *viva voce*, and practically, so far as may be convenient and attainable.

22. That the Professional Examinations be held by the several Licensing Bodies (except in special cases) at stated periods, to be publicly notified.

23. That Returns from the Licensing Bodies in Schedule (A) be made annually on January 1 to the General Medical Council, stating the number and names of the Candidates who have passed their First as well as their Second Examinations, and the number of those who have been rejected at the First and Second Examinations respectively; and that the Registrar forward a sufficient number of forms, with a notice for their being returned, in due time.

24. That it be recommended to all the Examining Boards that they should require from every Candidate for Examination before them a statement, signed by himself, whether he has or has not been rejected within three months by any of the Examining Boards included in Schedule (A) of the Medical Act.

25. That it is not desirable that any University of the United Kingdom should confer any degree in Medicine or Surgery, whether that of Bachelor, Doctor, or Master, upon Candidates who have not graduated in Arts, or passed all the Examinations required for the Bachelorship in Arts, or the Examinations equivalent to those required for a degree in Arts.

National Vaccine Establishment.—North Educational Station, under the Authority of Government, Tottenham-court Chapel, for Teaching and Granting Certificates of Qualification in Vaccination. — Mr. Simpson, F.R.C.S., attends Monday and Wednesday from 1 till 2 o'clock; Fee, One Guinea; Attendance Six Weeks. Mr. Simpson being appointed by the Privy Council, his certificate of proficiency authorises the Student to hold a Poor-law Appointment.—9, Gower-street, Bedford-square.

RULES AND REGULATIONS

OF THE

EXAMINING MEDICAL BODIES IN ENGLAND.

SESSION 1863—1864.

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UNIVERSITY OF OXFORD.

OFFICERS, 1863.

Registrar.—Edward Wetherell Rowden, D.C.L., late Fellow of New College.

PROFESSORS.

Regius Professor of Medicine.—H. W. Acland, M.D., Ch. Ch.

Sherardian Professor of Botany.—C. G. B. Daubeny, M.D., Fellow of Magdalen.

Lichfield's Professor of Clinical Medicine.—H. W. Acland, M.D.

Linacre Professor of Physiology and Anatomy.—George Rolleston, M.D., Pembroke.

Aldrichian Professor of Chemistry.—Sir Benjamin C. Brodie, Bart., M.A., Balliol.

TERMS REQUIRED FOR DEGREES IN ARTS.

By those who have not taken any Degree in Arts, Michaelmas and Hilary Terms are each kept by six weeks' residence, and Easter and Trinity Terms by three weeks each.

Twelve terms are required for the Degree of Bachelor of Arts, from all except the sons and eldest sons of the eldest sons of Peers, etc.

Bachelors of Arts proceed to their M.A. Degree in the twenty-seventh term (in the privileged cases twenty-third) from their Matriculation.

EXAMINATIONS REQUIRED FOR DEGREES IN ARTS.

All Undergraduates must pass three public Examinations before they can proceed to the B.A. Degree.

I. "Responsions," which may be passed any time up to the Sixth Term.

II. "Moderations," which may be passed as early as the Seventh and as late as the Tenth Term.

III. The "Public Examination," which must be passed in two Schools, but not necessarily in the same term, as early as the Twelfth, and (for Honours) as late as the Eighteenth Term. These Schools are (*a*) that of Literæ Humaniores, to be passed first and *by all;* (*b*) either Mathematics, or Natural Science, or Law and Modern History, whichever the candidate chooses.

TERMS REQUIRED FOR DEGREES IN MEDICINE.

For the Degree of Bachelor in Medicine, three years' or twelve terms' residence are necessary, as in the case of candidates for Degrees in Arts, with whom they must undergo a public examination, after which sixteen terms, or four years of Professional study, are necessary.

A B.M. enjoys the same privilege with the B.C.L. in reference to his M.A. Degree.

For a Doctor's Degree, three whole years after the Bachelor's are required.

EXAMINATIONS REQUIRED FOR DEGREES IN MEDICINE.

For the Degree of Bachelor of Medicine all Students (besides undergoing the same examination appointed for Bachelors of Arts) must pass two Medical Examinations: the first (in Anatomy, Physiology, Chemistry, Botany, and Mechanical Philosophy) (a) after the expiration of *two* years; the second (in the Theory and Practice of Medicine, Materia Medica and Therapeutics, Pathology, Hygiene, etc.) after the expiration of *four* years, from the date of having passed the B.A. examination in one School.

For a Doctor's Degree in Medicine a dissertation upon some subject, to be approved by the Regius Professor, is to be publicly recited in the Schools, and a copy of it afterwards delivered to the Professor.

UNIVERSITY FEES.

1. At Matriculation.—For a Servitor, or Bible-Clerk, 10s. For a nobleman, or the eldest son of a peer, £8. For Privileged persons (according to stat. tit. vi. 5, § 1), not claiming immunity, £5. For all others, £2 8s. And for non-Academicians, £1.

2. At Graduation.—For the Degree of B.A., S. Med., or S.C.L., £7 10s.; for B. Med., £6 10s. For the Degree of M.A., £12. For the Degree of M.A., if he has been admitted to his B.C.L. Degree before September 29, 1855, £4 5s.; if after that time, £7. For M.A., if B. Med., £7. For Bachelors in Divinity, £14; in Law, £6 10s. For Doctor in any of the superior faculties, £40. For Bachelor of Music, £5. For Doctor in Music, £10. For a Degree by Decree of Convocation, or granted to any in their absence, besides the usual fees, £5. For Degrees by accumulation, beyond the usual fees, £5. If any M.A. or Doctor, after having quitted the University, shall wish to return, he shall reside twenty-one days in any one Term, and pay a fee of £10, unless he would prefer to pay up the fees due from the time of his leaving the University. If he shall not reside, £20.

3. Incorporation Fees.—B.A., £8; M.A., £15; Bachelor in any of the superior faculties, £15; Doctor in any superior faculty, £40; B. Mus., £5; D. Mus., £10. For a Diploma, beyond the usual fees, £10 10s.

4. Fees *comitatis causa*, £1. Besides the above, every member of the University pays £1 6s. annually, in four quarterly payments, as University dues. In lieu, however, of this payment, all members having graduated, may at their option compound for all such dues on the following scale, viz.:—If he have not exceeded his 25th year, £22 15s.; 30th, £21 15s.; 35th, £20 12s. 6d.; 40th, £19 8s. 6d.; 45th, £18; 50th, £16 7s. 6d.; 55th, £14 15s.; 60th, £13 1s. 6d.; 70th, £9 6s. 6d.

5. Fees at Examination.—All Undergraduates are called upon to pay fees on entering their names for their respective Examinations: viz., for Responsions, 20s.; the First Public Examination, 21s.; the Final Examination, 21s.; for admission into any second school, 10s.; for Examination in Civil Law, 20s.; and in Medicine, 20s. An additional fee of £10 for the Examinations in Medicine is paid to Bachelors in that Faculty before admission to that Degree.

UNIVERSITY OF CAMBRIDGE.

OFFICERS, 1863.

Registrar.—H. Luard, M.A.

PROFESSORS.

Regius of Physic.—Henry J. Hayles Bond, M.D.

Chemistry.—G. Liveing, M.A., St. John's College.

Anatomy.—W. Clark, M.D., F.R.S.

Botany.—C. C. Babington, M.A., F.R.S., F.L.S.

Downing Professor of Medicine.—W. W. Fisher, M.D.

Linacre Lecturer on Physic.—G. E. Paget, M.D.

Lecturer on Human Anatomy and Physiology.—G. M. Humphry, M.D., F.R.S.

REGULATIONS FOR DEGREES IN MEDICINE AND SURGERY.

For the *Degree of Bachelor of Medicine* five years of Medical study are required, except in the case of those who have graduated with honours as Bachelors of Arts, four years being then deemed sufficient.

Nine terms (three years) must be spent in the University, the first three in the study of Classics and Mathematics, and the previous examinations in the additional subjects must be passed. The last six terms are devoted to Medical study. Four terms only of Medical study, however, in the University are required of a B.A. who has graduated with honours.

There are two Examinations. The first (after three years of Medical study) is in Chemistry, Botany, Comparative Anatomy, Human Anatomy and Physiology, Materia Medica and Pharmacy, Pathology, and selected portions of Celsus, Hippocrates, and Aretæus. Students who have passed in Chemistry, Botany, and Comparative Anatomy, in the examination for the Natural Sciences tripos, are not required to be again examined in them.

The second Examination (at the conclusion of the period of Medical study) is in Physiology, Pathology, and the Practice of Physic, Clinical Medicine, Medical Jurisprudence, and the Medical treatment of Surgical and Obstetric diseases.

The Examinations are partly in writing, partly *viva voce.*

An Act has to be kept, which consists in reading an original Thesis, and a *viva voce* examination on the subject of the thesis, and on other subjects.

Previously to the first Examination, Lectures must have been attended on Chemistry (including manipulations), Botany, Comparative Anatomy, Human Anatomy, and Physiology, Pathology, Materia Medica and Pharmacy; also Dissections for six months.

(a) Candidates who have already obtained a place in the first or second class in the Natural Science School, are excused these three last subjects.

Previously to the second Examination, Lectures must have been attended on the Principles and Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, Obstetrical Medicine; also Hospital Practice for three years.

The *Degree of Doctor of Medicine* may be taken three years after M.B. An Act has to be kept with *viva voce* Examination. A Master of Arts, proceeding to M.D., is required to produce the same certificates and pass the same Examinations as for M.B.

For the *Degree of Master in Surgery* the course is the same as for M.B., till the first Examination; and the first Examination is the same as for M.B.

The second Examination (at the completion of the period of study) is in Surgical Anatomy, Pathology, and the Principles of Surgery, Clinical Surgery (at the bed-side), Midwifery, and Medical Jurisprudence.

Previously to the second Examination, Lectures must have been attended on Human Anatomy (a second course), the Principles and Practice of Surgery, Clinical Surgery, Midwifery (with ten cases), Medical Jurisprudence; also a second season of Dissections, three years' Surgical, and one year's Medical Practice at a recognised Hospital, and a House-Surgeoncy or Dressership for six months.

Attendance at the Hospital and Lectures in Cambridge is recognised by the Universities of Cambridge and London, and (for one year) by the College of Surgeons and the Society of Apothecaries.

UNIVERSITY OF LONDON.

Registrar.—Dr. Carpenter, F.R.S., etc.

Practice of Medicine.—Edward A. Parkes, Esq., M.D., F.R.S., and Francis Sibson, Esq., M.D., F.R.S.

Surgery.—Thos. Blizard Curling, Esq., F.R.S., and John Hilton, Esq., F.R.S.

Anatomy and Physiology.—Professor Ellis, and Professor Peter Redfern, M.D.

Physiology, Comparative Anatomy, and Zoology.—George Busk, Esq., F.R.S, and W. T. Savory, Esq., F.R.S.

Midwifery.—Wm. Tyler Smith, Esq., M.D., and Charles West, Esq., M.D.

Chemistry.—Professor Wm. Allen Miller, M.D., F.R.S., and Professor Alex. Wm. Williamson, Ph.D., F.R.S.

Botany and Vegetable Physiology.—Joseph Dalton Hooker, Esq., M.D., F.R.S., and John Lindley, Esq., Ph.D., F.R.S.

Materia Medica and Pharmaceutical Chemistry.—Professor Alfred Baring Garrod, M.D., F.R.S., and Frederick Farre, Esq., M.D.

Forensic Medicine.—Professor Wm. Augustus Guy, M.B., and Wm. Odling, Esq., M.B., F.R.S.

REGULATIONS RELATING TO DEGREES IN MEDICINE.

BACHELOR OF MEDICINE.

Candidates for the Degree of Bachelor of Medicine shall be required—

1. To have passed the Matriculation Examination of this University, or to have taken a Degree in Arts in one of the Universities of the United Kingdom.
2. To have been engaged in their Professional studies during four years subsequently to Matriculation or Graduation in Arts, at one or more of the Medical Institutions or Schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised Institutions or Schools in the United Kingdom.
3. To pass the Preliminary Scientific Examination (a), and two examinations in Medicine.

PRELIMINARY SCIENTIFIC EXAMINATION.

The Preliminary Scientific Examination shall take place once in each year, and shall commence on the third Monday in July.

No Candidate shall be admitted to this Examination until he shall have completed his seventeenth year, and shall have either passed the Matriculation Examination, or shall have taken a Degree in Arts in one of the Universities of the United Kingdom; nor unless he have given to the Registrar fourteen days' notice of his intention to present himself.

The fee for this Examination shall be five pounds. If a Candidate fail to pass the Examination, the fee shall not be returned to him, but he shall be afterwards admissible to the Preliminary Scientific Examination without the payment of any additional fee, provided that he give notice to the Registrar at least fourteen days before the commencement of the Examination.

Candidates shall be examined in the following subjects (b):—Mechanical and Natural Philosophy; Inorganic Chemistry; Botany and Vegetable Physiology; Zoology and Comparative Anatomy.

EXAMINATION FOR HONOURS.

Any Candidate who has passed the Preliminary Scientific Examination may be examined for Honours in (1) Chemistry and Natural Philosophy, (2) Biology. If in the opinion of the Examiners any Candidate of not more than twenty-two years of age who shall have passed either the Preliminary Scientific M.B. Examination or the First B.Sc. Examination shall possess sufficient merit, the Candidate who shall distinguish himself the most of all the Candidates who shall have passed either of the said Examinations, and who are not more than twenty-two years of age, in Chemistry and Natural Philosophy, and the Candidate who shall distinguish himself the most of all the Candidates who shall have passed either of the said Examinations, and who are not more than twenty-two years of age, in Biology, shall each receive an Exhibition of forty pounds per annum for the next two years, payable in quarterly instalments (it being intended that one Exhibition only shall be given in each case among all the Candidates, although some of such Candidates may have passed the Preliminary Scientific M.B. Examination, and others the First B.Sc. Examination); provided that on receiving each instalment he shall declare his intention of presenting himself at the First M.B. Examination within three years from the time of his having passed the Preliminary Scientific Examination, or at the Second B.Sc. Examination within two years from the time of his having passed the First B.Sc. Examination.

FIRST M.B. EXAMINATION.

The First M.B. Examination shall take place once in each year, and shall commence on the last Monday in July. No Candidate shall be admitted to this Examination unless he have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having passed the Preliminary Scientific Examination at least one year previously.(c) 3. Of having, subsequently to having taken a Degree in Arts, or passed the Matriculation Examination, been a Student during two years at one or more of the Medical Institutions or Schools recognised by this University, and of having attended a Course of Lectures on each of three of the subjects in the following list:—Descriptive and Surgical Anatomy, General Anatomy and Physiology, Comparative Anatomy, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Midwifery and Diseases peculiar to Women and Infants, Surgery, Medicine. 4. Of having dissected during two Winter Sessions. 5. Of having attended a course of Practical Chemistry, comprehending Practical Exercises in conducting the more important processes of General and Pharmaceutical Chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of Mineral Waters, Animal Secretions, Urinary Deposits, Calculi, etc. 6. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of Medicines.

These Certificates shall be transmitted to the Registrar at least fourteen days before the Examination begins.

The fee for this Examination shall be five pounds. If a candidate fail to pass the examination the fee shall not be returned to him; but he shall be afterwards admissible to the First M.B. Examination without the payment of any additional fee, provided that he give notice to the Registrar at least fourteen days before the commencement of the Examination.

(a) Candidates who matriculated previously to January, 1861, will not be required to pass the Preliminary Scientific Examination in any other subjects than Chemistry and Botany; and they will be allowed to pass the Preliminary Scientific Examination and the First M.B. Examination in the same year, if they so prefer.

(b) Candidates who shall pass in all the subjects of the PRELIMINARY SCIENTIFIC Examination, and also in the Mathematics of the FIRST B.Sc. Examination, shall be considered as having passed both the PRELIMINARY SCIENTIFIC Examination, and also the FIRST BACHELOR OF SCIENCE Examination.

(c) See Note (a).

Candidates shall be examined in the following subjects:—Anatomy, Physiology,(d) Materia Medica and Pharmaceutical Chemistry, Organic Chemistry.

Such candidates only as shall be placed in the First Division shall be admissible to the Examination for Honours.

EXAMINATION FOR HONOURS.

Any Candidate who has been placed in the First Division at the First M.B. Examination may be examined for Honours in any or all of the following subjects:—Anatomy; Physiology, Histology, and Comparative Anatomy; Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry.

If, in the opinion of the Examiners, sufficient merit be evinced, the Candidate who shall distinguish himself the most in Anatomy, the Candidate who shall distinguish himself the most in Physiology, Histology, and Comparative Anatomy, and the Candidate who shall distinguish himself the most in Materia Medica and Pharmaceutical Chemistry, and in Organic Chemistry, shall each receive an Exhibition of £40 per annum for the next two years, payable in quarterly instalments; provided that on receiving each instalment he shall declare his intention of presenting himself at the Second M.B. Examination within three years from the time of his having passed the First M.B. Examination.

Under the same circumstances, the First and Second Candidates in each of the preceding subjects shall each receive a gold metal of the value of £5.

SECOND M.B. EXAMINATION.

The Second M.B. Examination shall take place once in each year, and shall commence on the first Monday in November.

No Candidate shall be admitted to this Examination within two Academical years of the time of his passing the First Examination, nor unless he have produced Certificates to the following effect:—

1. Of having passed the First M B. Examination.
2. Of having, subsequently to having passed the First M.B. Examination, attended a Course of Lectures on each of two of the subjects comprehended in the list above, and for which the Candidate had not presented Certificates at the first M.B. Examination.
3. Of having conducted at least twenty Labours. Certificates on this subject will be received from any legally qualified Practitioner in Medicine.
4. Of having attended the Surgical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery.
5. Of having attended the Medical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Medicine. N.B.—The Student's attendance on the Surgical and the Medical Hospital Practice specified in Regulations 4 and 5, may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the first M.B. Examination.
6. Of having, subsequently to the completion of his attendance on Surgical and Medical Hospital Practice, attended to Practical Medicine or Midwifery, with special charge of patients, in an Hospital, Infirmary, Dispensary, or Parochial Union during six months.

The Candidate shall also produce a certificate of moral character from a teacher in the last School or Institution at which he has studied, as far as the Teacher's opportunity of knowledge has extended.

These certificates shall be transmitted to the Registrar at least fourteen days before the Examination begins.

The fee for this Examination shall be £5. If a Candidate fail to pass the Examination, the fee shall not be returned to him; but he shall be afterwards admissible to the second M.B. Examination without the payment of any additional fee, provided that he give notice to the Registrar at least fourteen days before the commencement of the Examination.

Candidates shall be examined in the following subjects:—General Pathology, General Therapeutics, and Hygiene; Surgery; Medicine; Midwifery; Forensic Medicine. The Examination shall include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry.

Such Candidates only as shall be placed in the First Division shall be admissible to the Examination for Honours.

EXAMINATION FOR HONOURS.

Any Candidate who has been placed in the First Division at the Second M.B. Examination may be examined for Honours in any or all of the following subjects:—Medicine; Midwifery; Forensic Medicine. If in the opinion of the Examiners sufficient merit be evinced, the Candidate who shall distinguish himself the most in Medicine shall receive £50 per annum for the next two years, with the style of University Scholar in Medicine. Under the same circumstances, the Candidate who shall distinguish himself the most in Midwifery shall receive £30 per annum for the next two years, with the style of University Scholar in Midwifery. Under the same circumstances, the Candidate who shall distinguish himself the most in Forensic Medicine shall receive £30 per annum for the next two years, with the style of University Scholar in Forensic Medicine. Under the same circumstances, the first and second Candidates in each of the preceding subjects shall each receive a gold medal of the value of £5.

MASTER IN SURGERY.

The Examination for the Degree of Master in Surgery shall take place once in each year, and shall commence on the first Monday in March. No Candidate shall be admissible to this Examination unless he have produced Certificates to the following effect:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended a Course of Instruction in Operative Surgery, and of having operated on the Dead Subject. 3. Of having, subsequently to having passed the First M.B. Examination, attended to Practical Surgery, with special charge of patients in an Hospital, Infirmary, Dispensary, or Parochial Union, during Six Months.

These Certificates shall be transmitted to the Registrar at least fourteen days before the Examination begins.

The fee for this Examination shall be £5. If a Candidate fail to pass the Examination the fee shall not be returned to him, but he shall be admitted to any subsequent M.S. Examination without the payment of any additional fee, provided that he give notice to the Registrar at least fourteen days before the commencement of the Examination.

The Examination includes Surgical Anatomy; the performance of Surgical Operations on the Dead Subject; the Application of Surgical Apparatus, and a Report on Cases of Surgical Patients.

EXAMINATION FOR HONOURS.

Any Candidate who has passed the M.S. Examination may be examined for Honours in Surgery.

If, in the opinion of the Examiners, sufficient merit be evinced, the Candidate who shall distinguish himself the most in Surgery shall receive £60 per annum for the next two years, with the style of University Scholar in Surgery.

Under the same circumstances, the First and Second Candidates shall each receive a Gold Medal of the value of £5.

DOCTOR OF MEDICINE.

The Examination for the Degree of Doctor of Medicine shall take place once in each year, and shall commence on the fourth Monday in November. No Candidate shall be admitted to this Examination unless he have produced certificates to the following effect:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended, subsequently to having taken the Degree of Bachelor of Medicine in this University: *a.* To Clinical or Practical Medicine during two years in an Hospital or Medical Institution recognised by this University. *b.* Or, to Clinical or Practical Medicine during one year in an Hospital or Medical Institution recognised by this University, and of having been engaged during three years in the practice of his Profession. *c.* Or, of having been engaged during five years in the practice of his Profession, either before or after taking the Degree of Bachelor of Medicine in this University. One year of attendance on Clinical or Practical Medicine, or two years of practice will be dispensed with in the case of those

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(d) Any candidate shall be allowed, if he so prefer, to postpone his Examination in Physiology from the First M.B. Examination at which he presents himself for examination in the remaining subjects, until the First M.B. Examination in the next or any subsequent year; but such candidate shall not be admitted to compete for Honours on either occasion; and he shall not be admitted as a candidate at the Second M.B. Examination until after the lapse of at least twelve months after having passed his Examination in Physiology.

Candidates who at the Second Examination have been placed in the First Division. 3. Of moral character, signed by two persons of respectability.

These certificates shall be transmitted to the Registrar at least fourteen days before the Examination begins.

The fee for the Degree of Doctor of Medicine shall be £5. (e) If a Candidate fail to pass the Examination, the fee shall not be returned to him, but he shall be admissible to any subsequent Examination for the same Degree without the payment of any additional fee, provided that he give notice to the Registrar at least fourteen days before the commencement of the Examination.

Candidates shall be examined in the following subjects:— Logic and Moral Philosophy—(Candidates who have taken a Degree in Arts or in Science in this University, or in a University the Degrees granted by which are recognised by the Senate of this University, shall be exempted from this part of the Examination). (f) Medicine.

If in the opinion of the Examiners sufficient merit be evinced, the Candidate who shall distinguish himself the most at the Examination for the Degree of Doctor of Medicine shall receive a gold medal of the value of £20.

MATRICULATION.

N.B. Candidates for the Degree of B.A., and Candidates for the Degree of B.Sc., or of M.B. who have not graduated in Arts in one of the Universities of the United Kingdom, are required, except in the cases stated below, (g) to have passed the Matriculation Examination.

The Matriculation Examination is among those Examinations of which every Medical Student commencing his professional studies after September, 1861, is required (by the Regulations of the Medical Council) to have passed some one; and it is accepted by the Royal College of Surgeons of England in place of the Preliminary Examination otherwise imposed on Candidates for its Fellowship.

There are two Examinations for Matriculation in each year; one commencing on the second Monday in January, and the other on the first Monday in July.

No Candidate is admitted to the Matriculation Examination unless he have produced a Certificate showing that he has completed his sixteenth year.

The fee for Matriculation is two pounds.

The subjects of Examination are Mathematics; Natural Philosophy; Chemistry and Classics, including the Greek, Latin, and English languages; Outlines of English History and Modern Geography, and French or German at the option of the Candidate.

In the Examination for Honours two Exhibitions of thirty pounds each, tenable for two years, are awarded, one in Mathematics and Natural Philosophy, and one in Classics; and Prizes of £10 in money or books are given to the Candidates who have most distinguished themselves in Chemistry and Natural History.

In and after July, 1864, the special Honour Examination will be discontinued, the Candidates will be arranged in Three Divisions—in the Honours Division in Order of Merit; in the First and Second Divisions in Alphabetical Order. The Candidate who stands first in the Honour Division will receive an Exhibition of £30 for two years; the second one of £20, and the third one of £15 for the same time. The fourth will receive a prize of £10, and the fifth and sixth each a prize of £5 in books or money. Candidates for honours must not be more than twenty years of age.

UNIVERSITY OF DURHAM.

Warden.—The Very Rev. George Waddington, D.D., Dean of Durham.

Reader in Medicine.—Dennis Embleton, M.D., F.R.C.S.

Professor of Mathematics.—The Rev. Temple Chevallier, B.D.

Lecturer in Chemistry.—T. Richardson, M.A.

Registrar.—The Rev. Temple Chevallier, B.D.

Regulations relating to Medical Students, passed in Convocation in Easter Term, 1861:—

No one shall be held to be a Student in Medicine who has not been registered in a Register kept for that purpose. No one shall be so registered unless he has passed the Registration Examination, or such other Examination as the Warden and Senate shall deem equivalent. No grace for a Licence in Medicine shall be granted, unless the petitioner is of the age of twenty-one years, has spent four years in Medical study since his registration at one or more of the following places, namely, Durham, Newcastle-upon-Tyne, or in some other Medical School approved by the University, and has passed two public Examinations. No one shall be admissible to the first of these Examinations unless he has spent four years at least in Medical study as above prescribed. No one shall be admissible to the second of these Examinations unless he has spent four years at least in Medical study as above prescribed, and has passed the first Examination. No grace for the Degree of Bachelor of Medicine shall be granted, unless the petitioner is a Licentiate in Medicine, and is of the standing of twenty-one terms (seven years) at least from the date of his registration of matriculation. No one, who is not a Bachelor of Arts, shall be admissible to the Degree of Bachelor of Medicine, unless he has kept three terms by residence at Durham, and has passed both the final Examination for the Degree of Bachelor of Arts, or an equivalent to it, and also the Examination for the Degree of Bachelor of Medicine. No grace for the Degree of Doctor of Medicine shall be granted unless the petitioner is a Bachelor of Medicine of twenty-four terms at least (eight years) standing from his registration or matriculation, nor unless he has performed such exercises as the Warden and Senate require. This regulation shall be held to apply to those who are already Bachelors of Medicine. These regulations shall not (except by the desire of Students themselves) affect any Students in Medicine who were matriculated before October 1, 1861. These regulations shall not interfere with the power of the University to grant Degrees by Diploma to persons of sufficient standing and approved merit. No grace for the degree of Master in Surgery shall be granted unless the person is of the age of twenty-one years, has spent four years in Medical and Surgical study since his registration as a Student in Medicine, in some one or more of the following places, namely, Durham, Newcastle-upon-Tyne, or other Medical School approved by the University, and has passed two public examinations. The first of these Examinations shall be the first Examination appointed for Students in Medicine. No one shall be admissible to it who has not spent two years in Medical and Surgical study, as above prescribed. The second of these examinations shall be partly the same as that appointed for Students in Medicine, and partly different from it. No one shall be admissible to it who has not spent four years at least in Medical and Surgical study, as above prescribed, and passed the first Examination.

Regulations relating to persons now Students in Medicine at the Newcastle-upon-Tyne School of Medicine:—

1. Any Student in Medicine who has pursued his Medical studies in the Newcastle-upon-Tyne College of Medicine before the 1st day of August, 1861, and has been matriculated at the University of Durham before the same date, shall be entitled to count the time thus spent at Newcastle as if it had been spent after registration, provided he passes one of the ordinary Registration Examinations before October 31, 1862.

2. Any Student in Medicine who has spent two or more years in Medical study at Newcastle-upon-Tyne College of Medicine before the 1st day of August, 1861, and has been matriculated at the University of Durham before the same date, shall be admissible to the second and final Examination for a Licence in Medicine, or for the Degree of Master in Surgery, without having passed the first Examination, provided he has passed one of the ordinary registration Examinations before October 31, 1862, and has completed four years of Medical study since his admission as a Medical Student at Newcastle.

Order of Senate relating to the Registration of Students in Medicine:—

1. The name of every Student in Medicine shall be placed on a Register kept by the Registrar of the University of Durham.

2. No one shall be registered unless he has produced to the Warden the requisite Certificates of Examination and character.

(e) This fee will continue to be £10 to all such as, having taken their M.B. Degree under the former Regulations, shall not have paid the fee of £5 at the Preliminary Scientific Examination.

(f) The Degrees in Arts of all Universities in the United Kingdom are recognised by the Senate for this purpose.

(g) Candidates for the Degree of B.Sc who shall have attained the age of Twenty-two years, will be admitted to the First B.Sc. Examination of 1863 without having previously passed the Matriculation Examination. Candidates for the Degree of M.B. who commenced their professional studies in or before January, 1839, are exempted from the Matriculation Examination.

The requisite Certificate of Examination shall be a Certificate of his having passed either the Registration Examination appointed by the University of Durham, or any one of the Examinations named in the Minutes of the Medical Council for England.

The Registration Examination (in English History, Grammar, Geography, Arithmetic, Latin, Greek, and French, the two last at the option of the Candidate) will begin at Durham on Tuesday, September 22, 1863, and on Tuesday, April 26, 1864, at 9 in the morning.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

President.—Dr. Thomas Watson.

Censors.—Drs. Owen Rees, Birkett, West, and Handfield Jones.

Treasurer.—Dr. Alderson.

Registrar.—Dr. H. A. Pitman.

Beadle.—Mr. W. Copney.

The following Regulations are now in force:—

EXTRACTS FROM BYE-LAWS AND REGULATIONS.

Members.

The Members of the College, present and future, shall be alone eligible to the Fellowship.

All Candidates for the Membership of the College who have commenced their professional studies after September, 1861, shall satisfy the Censors' Board that previously to the commencement of their professional studies they have obtained a degree in Arts from some University of the United Kingdom or of the Colonies, or from some other University specially recognised by the Medical Council, or that they have passed examinations equivalent to those required for a degree in Arts. All other Candidates for Membership shall, before admission to the Professional Examination, be examined on the subjects of general education by the President and Censors of the College.

Any person who does not dispense or supply medicine, and who shall have satisfied the College touching his knowledge of Medical and general science and literature, and who shall comply with the Bye-laws and regulations of the College, may be proposed to the College to be admitted a Member of the College.

Every Candidate for Membership under the last Bye-law shall furnish proof that he has attained the age of twenty-five years.

Every such Candidate shall produce a testimonial from a Fellow or Member of the College, satisfactory to the Censors' Board, to the effect that, as regards moral character and conduct, he is a fit and proper person to be admitted a Member of the College.

Section 8.—Every such Candidate shall produce proof of having passed an examination in the subjects of general education; and in the case of Candidates who shall have commenced their Professional studies after September, 1861, the examination in general education must have been passed before they commenced their Professional studies.

Section 9.—Every such Candidate (except such as shall be admissible under the provisions of Section 18) shall produce proof of his having been engaged in the study of Physic during a period of five years, of which four years at least shall have been passed at a Medical school or schools recognised by the College.

Section 10.—Every such Candidate (except such as shall be admissible under the provisions of Section 18) shall produce evidence satisfactory to the Censors' Board of his having studied the following subjects:—Anatomy, with dissections; Physiology; Chemistry, with Practical Chemistry; Materia Medica and Botany; Morbid Anatomy; Principles and Practice of Medicine; Principles and Practice of Surgery; Midwifery, and the Diseases peculiar to Women and Children; Forensic Medicine; of his having attended diligently, during three years, the Medical practice, and during one year the Surgical practice, of an Hospital containing at least 100 beds, and of his having served the office of clinical clerk during at least six months.

Every such Candidate who has prosecuted his studies abroad, whether in part or to the full extent required by the preceding Bye-law (except such as shall be admissible under the provisions of Section 18), shall, nevertheless, bring proof of his having attended, during at least twelve months, the Medical practice of an Hospital in the United Kingdom containing 100 beds.

No such Candidate shall be admitted to Examination who is engaged in trade, or who dispenses medicine, or makes any engagement with a chemist, or any other person, for the supply of medicines, or who practises medicine or surgery in partnership, by deed or otherwise, so long as that partnership continues.

Every such Candidate (except in cases specially exempted (under Sections 17 and 18) shall have given proof of his acquirements by written answers to questions placed before him, and shall have been examined *viva voce* at three separate meetings of the Censors' Board, and shall have been approved by the President and Censors, or by the major part of them, at each Examination.

Except so far as otherwise provided by Bye-law the Candidate for Membership shall be examined in Physiology, in Pathology, and in Therapeutics, in three separate Examinations, by written questions, as well as *viva voce*, at three meetings of the Censors' Board. At, or in connection with, the second examination before the Censors' Board, the Candidate's knowledge of practical medicine shall be tested, by requiring him to examine persons labouring under disease, and to describe morbid specimens. At the commencement of the first *viva voce* examination, the Candidate may, if he think fit, declare in writing what honours have been conferred upon him, in regard to his knowledge of Literature, Science, or Medicine; and such declaration shall, if it seem fit to the Censors' Board, be recorded in the annals of the College.

Section 17.—Any such Candidate who has already obtained the Degree of Doctor or Bachelor of Medicine at a University in the United Kingdom, wherein the courses of study, and the Examinations to be undergone by the Students previously to graduation, shall have been adjudged by the Censors' Board to be entirely satisfactory, shall be exempt (if the Censors shall think fit) from all or any parts of the Examinations hereinbefore described, except such as relate to Pathology and Therapeutics. Every Candidate for the membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages.

Section 18.—If any such Candidate who has attained the age of forty years, but has not fulfilled all the conditions required by Sections 8, 9, and 10, shall produce testimonials, not merely satisfactory as to his moral character and conduct and his general and Professional acquirements, but further, showing that he has improved the art or extended the science of Medicine, or has at least distinguished himself highly as a Medical Practitioner; the Censors' Board, having well weighed and considered these testimonials, may, if they see fit, submit them to the Fellows at a general meeting, and it shall be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the Candidate shall be admitted to Examination, which shall, in every such case, be as full and complete as the Censors may deem sufficient.

LICENTIATES.

The College will, under its Charter, grant licences (which are not to extend to make the Licentiates Members of the Corporation) to persons who shall conform to the following Bye-laws and Regulations:—

Every Candidate for the College Licence (except in cases specially exempted) is required to produce satisfactory evidence to the following effect:—1. Of having attained the age of twenty-one years. 2. Of moral character. 3. Of having passed a preliminary Examination in the subjects of general education. 4. Of having been registered as a Medical Student by one of the Bodies named in Schedule (A) of the Medical Act. 5. Of having been engaged in Professional studies during four years, of which at least three years shall have been passed at a recognised Medical School or Schools, and of having attended the Medical Practice at a recognised Hospital or Hospitals during two years of that period; and the Surgical Practice during twelve months; and of having been engaged during six months in the Clinical Study of Diseases peculiar to Women. The last of the four years of Professional study must be passed at a Medical School, Hospital, Infirmary, or Dispensary recognised by the College. 6. Of having studied the following subjects:—Anatomy (with Dissections) during two Winter Sessions of six months each; Physiology during two Winter Sessions of six months each;

Chemistry during six months; Practical Chemistry during three months; Materia Medica during three months; Practical Pharmacy during three months; Botany during three months; Morbid Anatomy during six months, or certified attendance in the Post-mortem Room during the period of Clinical Study; Principles and Practice of Medicine during two Winter Sessions of six months each; Principles and Practice of Surgery during six months; Clinical Medicine during one Winter Session and one Summer Session, or nine months; Clinical Surgery during six months; Midwifery and the Diseases peculiar to Women during three months. A Certificate must also be produced of having attended not less than twenty Labours; Forensic Medicine during three months. 7. Of having passed the Professional Examinations.

Any candidate, being a "Registered Medical Practitioner," whose qualification or qualifications shall have been obtained before the first day of January, 1861, having been, with the consent of the College, admitted a candidate for the Licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the Professional Examinations as his qualifications may seem to the Examiners to render in his case unnecessary.

Any Candidate, who has already obtained the Degree of Doctor or Bachelor of Medicine at a University, approved and recognised by the College, after a course of study and an Examination satisfactory to the College, or who has already obtained the Licence of the Royal College of Physicians of Edinburgh, or of the King and Queen's College of Physicians in Ireland, after a course of study and an Examination satisfactory to the Examiners appointed by the College, shall be exempt from the First Part of the Professional Examination for the Licence.

The fee to be paid for the Licence to practise Physic as a Licentiate of the College is fifteen guineas.

No Fellow or Member of the College shall be engaged in trade or dispense medicines, or make any engagement with a chemist or any other person for the supply of medicines, or practise Medicine or Surgery in partnership, by deed or otherwise.

No Fellow, Member, or Licentiate of the College shall assume the title of Doctor of Medicine, or use any other name, title, designation, or distinction implying that he is a Graduate in Medicine of a University, unless he be a Graduate in Medicine of a University.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

No Licentiate of this College shall, by virtue of his Licence, represent himself as being a Fellow or Member of a College of Physicians.

THE PRELIMINARY EXAMINATION.

The Preliminary Examination will be held at the College in March and September:—Tuesday, March 22, Wednesday, March 23, and Tuesday, September 27, Wednesday, September 28, 1864. Tuesday morning, ten to one. English and Latin. English will include English Grammar and Composition. Latin will include selections from the following authors:—March, 1864, Cornelius Nepos—Vita Miltiadis. Virgilii Æneis, Lib. ii. September, 1864, Cicero de Amicitia. Horatii Carmina, Lib. ii. Wednesday morning, ten to one. English History and Modern Geography. Wednesday afternoon, two to five. Mathematics and Natural Philosophy. Mathematics will include the ordinary Rules of Arithmetic, Vulgar and Decimal Fractions, Simple Equations, the First Book of Euclid. Natural Philosophy will include Mechanics, Acoustics, Hydrostatics, Hydraulics, Pneumatics, and Optics.

The Preliminary Examination must be passed previously to the time of commencing studies at a Medical School; but in the case of Candidates who have commenced the prescribed course of Medical studies before the first day of October, 1861, the Examination in General Education may be passed at any time before the Examination for the Licence.

Every Candidate intending to present himself for the Preliminary Examination must give fourteen days' notice in writing to the Registrar of the College, and before he is admitted to the Examination he must pay a fee of two guineas. Should he fail to pass the Examination the fee will not be returned, but he may be admitted to a subsequent Preliminary Examination without the payment of an additional fee.

Testimonials of proficiency granted by the National Educational Bodies, according to the following list, with such additions as may from time to time be made, will be accepted by the Examiners as satisfactory, in lieu of the Preliminary Examination conducted at the College:—A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised, from time to time, by the Medical Council. Oxford Responsions or Moderations. Cambridge Previous Examinations. Matriculation Examination of the University of London. Oxford Middle Class Examinations, Senior. Cambridge Middle Class Examinations, Senior. Durham Middle Class Examinations, Senior. Durham Examinations for Students in Arts, in their second and first years. Durham Registration] Examination for Medical Students. Dublin University Entrance Examination. Queen's University, Ireland, two years' Arts' course for the Diploma of Licentiate in Arts. Preliminary Examinations at the end of A.B. course. Middle Class Examinations. Matriculation Examinations. First Class Certificate of the College of Preceptors. Examination in Arts at Codrington College, Barbadoes. Second Class in Literature and Science of the Cape of Good Hope. An Examination established by any of the Bodies named in Schedule (A) of the Medical Act, approved by the Medical Council.

THE PROFESSIONAL EXAMINATION.

Every Candidate for the College Licence is required to produce satisfactory evidence before admission to Examination, of having been registered as a Medical Student by one of the bodies named in Schedule (A) of the Medical Act.

Every Candidate, before he is admitted to examination, will be required to sign a declaration, stating whether he has or has not been rejected within three months by any of the Examining Boards included in Schedule (A) of the Medical Act.

The examination is divided into two parts.(a) The first part will be conducted as follows:—On the first day, evening, from seven to ten, by written questions on Anatomy and Physiology. Second day, afternoon, from one to four, by written questions on Chemistry, Materia Medica, and Practical Pharmacy. Evening, commencing at seven o'clock, *viva voce*, on the subjects stated above. The second part will be conducted as follows:—On the first day, evening, from seven to ten, by written questions on the Principles and Practice of Medicine. Second day, morning—The Candidate's practical knowledge will be tested, by requiring him to examine persons labouring under disease, either at the College or in the Medical Wards of an Hospital. Evening, from seven to ten, by written questions on Midwifery and the Diseases peculiar to Women, and on the Principles and Practice of Surgery. Third day, morning—The Candidate's practical knowledge will be tested, by requiring him to examine persons labouring under disease in the Surgical Wards of an Hospital. Evening, commencing at seven o'clock, *viva voce*, on the subjects stated above.

The first part of the Professional Examination is to be undergone after the termination of the Second Winter Session of study at a recognised Medical School, and the second part after an interval of at least eighteen months from the first Examination, except in the case of students who have commenced their Professional Education before October, 1861.

Any Candidate who shall fail to pass either of these Examinations, will not be re-admitted to Examination until after the lapse of six months.

Every Candidate intending to present himself for Examination, must give fourteen days' notice, in writing, to the Registrar of the College, with whom all Certificates and Testimonials must be left fourteen days before the day of Examination.

Blank forms of the required Certificates of attendance on Hospital Practice and on Lectures may be obtained on application at the College.

The fee for admission to the first part of the Examination is £5 5s.; the fee for admission to the second part of the Examination is £10 10s.; and there is no further fee for the Licence.

(a) Examinations of Candidates for the College Licence will take place as follows:—1863.—First part commencing Tuesday, October 6 and December 1. Second part, commencing October 13 and December 8. 1864.—First part, commencing February 2, April 5, June 7, July 5, October 4, December 6. Second part, commencing February 9, April 12, June 14, July 12, October 11, December 13.

ROYAL COLLEGE OF SURGEONS OF ENGLAND,

LINCOLN'S-INN-FIELDS.

President.—Frederick Carpenter Skey.

Vice-Presidents.—Joseph Hodgson and Thomas Wormald.

The Council.—William Lawrence, Joseph Swan, Joseph Henry Green, James Moncrieff Arnott, John Flint South, James Luke, Gilbert Wakefield Macmurdo, Francis Kiernan, George Gulliver, Richard Partridge, John Hilton, Richard Quain, Edward Cock, Samuel Solly, Alexander Shaw, William Fergusson, Thomas Paget, John Adams, Samuel Armstrong Lane, George Busk, and Henry Hancock.

The Court of Examiners.—Frederick Carpenter Skey, Joseph Hodgson, Thomas Wormold, James Luke, William Lawrence, Joseph Swan, Joseph Henry Green, James Moncrieff Arnott, John Flint South, Cæsar H. Hawkins, and Francis Kiernan.

Board of Examiners in Midwifery.—Joseph Hodgson, Dr. Arthur Farre, Dr. Henry Oldham, Dr. Robert Lee.

Examiners for the Fellowship in Classics, Mathematics, and French.—Goldwin Smith, George Gabriel Stokes, Isidore Brasseur.

Professor of Human Anatomy and Surgery.—William Fergusson.

Professor of Comparative Anatomy and Physiology.—Thomas Henry Huxley.

Conservator of the Museum.—William Henry Flower.

Assistant in the Museum.—James Pettigrew.

Librarian.—John Chatto.

Secretary.—Edmund Belfour.

Assistant-Secretary.—E. J. Trimmer.

Clerk.—Thomas Madden Stone.

Admission to the Fellowship by Examination.—1. Except in the cases and instances hereinafter provided for to the contrary, every Candidate for the Fellowship, whether a Member of the College or not, is required to produce Certificates satisfactory to the Court of Examiners,—That he is twenty-five years of age. That he is (if found qualified upon Examination) a fit and proper person to be admitted to the Fellowship, which Certificate must be signed by three Fellows. That he has passed the preliminary Examination in Classics, Mathematics, and French appointed by the Council; or that he has passed in the University of Oxford, or Cambridge, or London, the Examination in Arts required in those Universities, respectively, of Candidates for their Degrees in Medicine. That he has been engaged for six years in the acquirement of Professional knowledge in recognised Hospitals or Schools, and that not less than three Winter and three Summer Sessions thereof have been passed in one or more of such Hospitals in London. That he has studied Anatomy and Physiology by attendance on Lectures and Demonstrations, and by Dissections, during three Winter Sessions of not less than six months each, at a recognised School or Schools. That he has attended Lectures on the Theory and Practice of Medicine and on Clinical Medicine; and also on the Theory and Practice of Surgery and on Clinical Surgery, during two sessions of not less than six months each, at recognised Schools and Hospitals. That he has attended one course of Lectures on each of the following subjects, viz.:—Chemistry, Materia Medica, Midwifery, with attendance on Cases, Medical Jurisprudence, and Comparative Anatomy, at one or more recognised School or Schools. That he has attended the Surgical Practice of a recognised Hospital or Hospitals during four Winter and four Summer Sessions, and the Medical Practice of a recognised Hospital or Hospitals during one Winter and one Summer Session. And that he has served the office of House-Surgeon or Dresser in a recognised Hospital in the United Kingdom. He is also required to present Clinical Reports with observations thereon of six Surgical Cases taken by himself at one or more recognised Hospital or Hospitals in the United Kingdom, with satisfactory evidence of their authenticity and genuineness.

2. In the case of a Candidate who has taken by examination the degree of Bachelor or Master of Arts in any University in the United Kingdom, it will be sufficient to produce a Certificate that he has been engaged for five years (instead of six years) in the acquirement of Professional knowledge in recognised Hospitals or Schools, but in all other respects he must produce the Certificates of the foregoing course of study.

3. Any person who was a Member of the College on September 14, 1844, will be admitted to examination for the Fellowship upon the production of a Certificate signed by three Fellows, that he has been eight years in the practice of the Profession of Surgery, and that he is a fit and proper person to be admitted a Fellow, if upon examination he shall be found qualified.

4. Any person who shall have become a Member of the College after the said September 14, 1844, will, after the expiration of twelve years from the date of the Diploma, be admitted to examination for the Fellowship upon the production of a Certificate, signed by three Fellows, that he has been for twelve years in the practice of the Profession of Surgery, and that he is a fit and proper person to be admitted a Fellow, if upon examination he shall be found qualified.

The Preliminary Examination in Classics, Mathematics, and French is held in the months of April and October; to which Candidates are admitted upon having completed the eighteenth year of their age, and on the payment of the fee of Ten Guineas. The Professional Examination is held in the months of May and November, and occupies two days, either successive, or at such interval as the Court of Examiners may appoint. The subjects of the first day's Examination are Anatomy and Physiology; those of the second day, Pathology, Therapeutics, and Surgery; the Candidate has to perform dissections or operations on the dead body. Graduates in Medicine of any University in the United Kingdom will be admitted to the Fellowship of this College after having passed the Professional Examination in Surgery only; provided that the educational and other requirements of such Graduates by the Universities in question be deemed equivalent to those imposed on the Candidates for the Fellowship of this College. A Candidate whose qualifications shall be found insufficient upon his Professional Examination, will not be allowed to present himself a second time until after the expiration of one year from such Examination.

The following are the Subjects of the Preliminary Examination of the Candidates for the Fellowship during the year 1864, viz.:—

Classics.—Herodotus, Book III. Euripides, Medea, and Alcestis. Livy, Books XXVI. XXVII. Horace, Epistles. Each Candidate is required to bring up one of the above Greek and one of the above Latin authors; one prose writer and one poet.

Mathematics.—Arithmetic. Algebra, as far as to include the doctrine of Proportion; and Simple Equations with one or two unknown quantities. Euclid: Books 1, 2, and 3. Statics, Hydrostatics, Optics, and Acoustics. In the physical subjects it will be sufficient to be prepared with general explanations of the leading phenomena, such as may be found in Treatises on Physics; except in the case of Statics and Hydrostatics, in which mathematical demonstrations of the elementary propositions will also be required, such as may be found in any of the following books:—Barrett's Propositions in Mechanics and Hydrostatics. Snowball's Cambridge Course of Elementary Natural Philosophy. Whewell's Mechanical Euclid. Williams's Elements of Mechanics and Hydrostatics. In Optics, careful drawings will be required of the course of rays transmitted through lenses, etc., illustrating the formation of images.

French.—The Translation into English of a passage in two of the following works, at the option of the Candidate:—Athalie.—Racine. Conjuration contre Vénise.—Saint Réal. Essai sur les mœurs et l'esprit des nations.—Voltaire. Grammatical questions on the parts of speech, particularly the conjugation of the irregular verbs in the selected passages.

REGULATIONS RESPECTING THE EDUCATION AND EXAMINATION OF CANDIDATES FOR THE DIPLOMA OF MEMBER.

Preliminary General Education and Examination.—Candidates who have commenced their Professional Education on or after January 1, 1861, will be required to produce one or other of the following Certificates:—1. Of Graduation in Arts at a University recognised for this purpose. The following are the Universities at present recognised, viz.:—Oxford, Cambridge, Dublin, London, Durham, and Queen's University in Ireland; Calcutta, Madras, and Bombay; Canada: McGill College, Montreal, and Queen's College, Kingston. 2. Of having passed an Examination for Matriculation, or such other Examination as shall, in either case, from time to time be sanctioned by the Council of this College, at a University in the United Kingdom, or at a Colonial or Foreign University recognised by the Council of this College. The following are the Examinations at present recognised under this Clause (No. 2), viz.:—Oxford: Responsions or Moderations; Middle-Class Examinations, Senior. Cambridge: Previous Examination; Middle-Class Examinations, Senior. Dublin: Entrance Examination. London: Matriculation Examination. Durham: Examination of Students in Arts in their second and first years. Middle-Class Examinations, Senior. Registration Examination for Medical Students. Queen's University in Ireland: Two years' Arts Course for Diploma of Licentiate in Arts; Preliminary Examinations at end of B A. Course; Middle-Class Examinations; Matriculation Examinations. Queen's College, Belfast: Preliminary Examination for non-Matriculated Students. Edinburgh: Extra Professional Examination for Graduation in Medicine. Calcutta, Madras, and Bombay: Matriculation Examinations. McGill College, Montreal: Preliminary Examination in General Literature. Queen's College, Kingston, Canada: Matriculation Examination; Preliminary Examination of Students in Medicine. 3. Of having passed the Preliminary Examination of the Royal College of Physicians of London. 4. Of having passed the Preliminary Examination for the Fellowship of this College. 5. Of having passed the Preliminary Examination of the Royal College of Surgeons in Ireland. 6. Of having passed the Preliminary Examination of the Royal College of Surgeons of Edinburgh. 7. Of having passed the Preliminary Examination of the Faculty of Physicians and Surgeons of Glasgow. 8. Of having passed the Examination in Arts of the Society of Apothecaries of London. 9. Of having passed the First-Class Examination of the Royal College of Preceptors. 10. Testamur of the Codrington College, Barbadoes. 11. Candidates who shall not be able to produce one or other of the foregoing certificates will be required to pass an Examination in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of the Council of this College.

The following are the subjects of the Examination (No. 11) during the years 1863 and 1864, viz.:—Part I.—1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition; such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No Candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of Vulgar Fractions, and of Decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History, that is, the succession of the Sovereigns and the leading events of each reign. 8. Euclid, Books I. and II. 9. Translation of a passage from the first book of Cæsar's Commentaries, "De Bello Gallico." Part II.—Papers will also be set on the following seven subjects; and each Candidate will be required to offer himself for examination on one subject at least, at the option of the Candidate; but no Candidate will be allowed to offer himself for examination on more than four subjects:—1. Translation of a passage from St. John's Gospel in Greek. 2. Translation of a passage from Voltaire's "Histoire de Charles XII." 3. Translation of a passage from the first two books of Schiller's "Geschichte des dreissigjährigen Krieges." Besides these translations into English, the Candidate will be required to answer questions on the Grammar of each subject whether compulsory or selected. 4. Mathematics. Algebra to Simple Equations inclusive. 5. Mechanics. The questions will be chiefly of an elementary character. 6. Chemistry. The questions will be on the elementary facts of Chemistry. 7. Botany and Zoology. The questions will be on the classification of Plants and Animals. The quality of the handwriting and the spelling will be taken into account.

Professional Education.—I. Candidates who have commenced their Professional Education on or after the 1st of October, 1862, will not be allowed to register such commencement before they shall have passed an Examination in General Knowledge, in conformity with the regulation of the Council in the preceding Section.

II. The following will be considered as the commencement of Professional Education:—1. Attendance on the Practice of an Hospital or other Public Institution recognised by this College for that purpose. 2. Instruction as the pupil of a leg a qualified Surgeon, *holding the appointment of Surgeon to an Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council.* 3. Attendance on Lectures on Anatomy, Physiology, or Chemistry, by Lecturers recognised by this College. *The commencement of Professional study, otherwise than by attendance on Lectures in recognised Medical Schools, or by attendance on the Practice of recognised Hospitals, will not be admitted until a Certificate thereof shall be furnished to the Secretary for registration at the College, by the Practitioner whose Pupil the Candidate shall have become, or by the Medical Superintendent of the Hospital or other Institution to the practice of which he shall have entered; and will, consequently, date only from the reception of such Certificate by the Secretary, the Certificate to be accompanied by proof of having passed the necessary Preliminary Examination in General Knowledge.*

III. Candidates will be required to produce the following other Certificates, viz.:—1. Of being twenty-one years of age. 2. Of having been engaged during four years in the acquirement of Professional knowledge. 3. Of having studied Practical Pharmacy during three months. 4. Of having attended Lectures on Anatomy, delivered not less frequently than four times in each week, during two Winter Sessions. 5. Of having performed dissections during not less than two Winter Sessions. 6. Of having attended Lectures on Physiology delivered not less frequently than twice in each week during two Winter Sessions. 7. Of having attended Lectures on Surgery during two Winter Sessions, *of which one Course must not be earlier than the third Winter Session at a recognised Medical School.* 8. Of having attended one Course of Lectures on each of the following subjects, viz., Chemistry, Materia Medica, Medicine, and Midwifery. 9. Of Instruction and Proficiency in the practice of Vaccination. 10. Of having attended, at a recognised Hospital or Hospitals in the United Kingdom or Colonies, the Practice of Surgery, and Clinical Lectures on Surgery, during three Winter (a) and two Summer (b) Sessions. 11. Of having attended, at a recognised Hospital or Hospitals in the United Kingdom or Colonies, the Practice of Medicine, and Clinical Lectures on Medicine, during one Winter and one Summer Session. 12. *Of having, subsequently to the completion of two years' Professional Education, taken charge of Patients under the superintendence of a Surgeon during not less than six months, at an Hospital, General Dispensary, or Parochial or Union Infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery.*

N.B.—Blank forms of the required Certificates may be obtained on application to the Secretary, and all such Certificates will be retained at the College.

1. Certificates will not be received on more than one branch of Science from one and the same Lecturer; but Anatomy and Dissections will be considered as one branch of Science.

2. Certificates will not be recognised from any Hospital in the United Kingdom unless the Surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any School of Anatomy and Physiology or Midwifery, unless the Teachers in such School be members of some legally constituted College of Physicians or Surgeons in the United Kingdom: nor from any School of Surgery, unless the Teachers in such School be members of one of the legally constituted Colleges of Surgeons in the United Kingdom.

3. No Metropolitan Hospital will be recognised by this College which contains less than 150, and no Provincial or Colonial Hospital which contains less than 100 Patients.

4. The recognition of Colonial Hospitals and Schools is governed by the same regulations, with respect to number of Patients and to Courses of Lectures, as apply to the recognition of Provincial Hospitals and Schools in England.

5. Certificates of Attendance upon the practice of a recognised Provincial or Colonial Hospital unconnected with, or not in convenient proximity to, a recognised Medical School, will not be received for more than one Winter and one Summer Session of the Hospital Attendance required by the Regulations of this College; and in such cases Clinical Lectures will not be necessary, *but a Certificate of having acted as Dresser for the period of at least six months will be required.*

6. Certificates will not be received from Candidates who have studied in London, unless they shall have registered at

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(a) The Winter Session comprises a period of six months, and, in England, commences on the 1st of October and terminates on the 31st of March.

(b) The Summer Session comprises a period of three months, and, in England, commences on the 1st of May and terminates on the 31st of July.

the College their cards of admission to attendance on Lectures and Hospital Practice within fifteen days from the commencement of the Session ; nor from Candidates who have studied in the Provincial Schools in England, unless their names shall be duly returned from their respective Schools.

N.B.—At the Registration in October, Candidates who shall have commenced their Professional Education subsequently to October 1, 1862, will be required to produce a Certificate of having passed one or other of the Preliminary Examinations in General Knowledge recognised by this College.

NOTE.— *The Regulations in italics will come into force in the case of Candidates in the United Kingdom commencing their Professional Education on or after October* 1, 1863 ; *and in the case of Candidates commencing their Professional Education in the Colonies, from and after October* 1, 1864.

7. Those Candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several Certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland, from Candidates for their Diploma, together with a Certificate of instruction and proficiency in the practice of Vaccination ; and in the case of Candidates who shall have pursued the whole of their studies at recognised Foreign or Colonial Universities, upon the production of the several Certificates required for their Degree by the authorities of such Universities, together with a Certificate of instruction and proficiency in the practice of Vaccination.

8. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and Graduates in Surgery of any University recognised for this purpose by this College, will be admitted to examination on producing their Diploma, Licence, or Degree, together with proof of being twenty-one years of age, of having been occupied at least four years in the acquirement of professional knowledge, and of instruction and proficiency in the practice of Vaccination.

9. Graduates in Medicine of any legally constituted College or University recognised for this purpose by this College, will be admitted to examination on adducing, together with their Diploma or Degree, proof of being twenty-one years of age, of having been occupied at least four years in the acquirement of professional knowledge, and of instruction and proficiency in the practice of Vaccination.

Professional Examination.—This Examination is divided into two parts :—1. The First or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently-dissected Subject, and on prepared parts of the Human body. 2. The Second or Pass Examination, on Pathology, Surgery, and Surgical Anatomy, is partly written and partly oral. 3. The Primary Examinations are held in the months of January, April, May, July, and November, and the Pass Examinations generally in the ensuing week respectively. 4. Candidates will not be admitted to the Primary, or Anatomical and Physiological Examination, until after the termination of the second Winter Session of their attendance at a recognised School or Schools ; nor to the Pass, or Pathological and Surgical Examination, until after the termination of the fourth year of their Professional education. 5. Candidates, being Graduates in Medicine of either of the Universities of Oxford, Cambridge, or London, will be required to present themselves for the Pass Examination in Pathology and Surgery only. 6. The fee of Five Guineas paid by each Candidate prior to his Primary Examination will not be returned, but will be allowed in the fee on his admission as a Member. 7. A Candidate having entered his name for either the Primary or Pass Examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within the period of three months from the date at which he shall have so failed to attend. 8. A Candidate referred on the Primary Examination is required, prior to his admission to re-examination, to produce a Certificate of the performance of dissections during not less than three months, subsequently to the date of his reference. 9. A Candidate referred on the Pass Examination is required, prior to his admission to re-examination, to produce a Certificate of at least six months' further attendance on the Surgical Practice of a recognised Hospital, together with Lectures on Clinical Surgery, subsequently to the date of his reference.

THE SOCIETY OF APOTHECARIES.

BLACKFRIARS.

Master.—H. Combe, Esq.

Wardens.—J. L. Wheeler, Esq., and C. Higham, Esq.

Court of Examiners.—Dr. T. Ansell, Chairman ; W. Dickinson, Esq., Dr. R. H. Robertson, Dr. R. King, Dr. G. Corfe, Dr. R. H. Semple, Dr. W. G. T. Dyer, Dr. C. Taylor, Dr. Stephen H. Ward, Dr. J. S. Lavies, Dr. J. S. Stocker, Dr. F. C. Webb.

Secretary to the Court of Examiners.—A. M. Randall, Esq.

Special Board of Examiners in Arts.—George Buchanan, M.D., B.A., Londin. ; John Clewin Griffith, M.A., M.B., Cantab. ; Uriah Perrin Brodribb, M.B., B.A., Londin.

Professor of Chemistry and Materia Medica and Examiner for the Society's Prizes in Materia Medica and Pharmaceutical Chemistry.—W. T. Brande, Esq., D.C.L., F.R.S.

Examiner for the Society's Prizes in Botany.—Joseph D. Hooker, Esq., M.D., F.R.S., F.L.S.

Clerk to the Society.—R. B. Upton, Esq.

Curator of the Botanic Garden.—Mr. T. Moore, F.L.S.

Beadle.—Mr. J. C. Sargeant.

REGULATIONS, ETC.

Every Candidate for a certificate of qualification to practise as an Apothecary will be required to produce testimonials:—

1. Of having passed a Preliminary Examination in Arts as a test of General Education.

This Examination must be passed before the commencement of Professional studies, which is defined by the Medical Council "to be the time of commencing studies at a Medical School."

2. Of having served an apprenticeship or pupilage of not less than five years to a Practitioner qualified by the Act of 1815. N.B.—This period may include the time spent in attending Lectures and Hospital Practice.

3. Of having attained the full age of twenty-one years :—As evidence of age, a copy of the baptismal register will be required in every case where it can possibly be procured

4. Of good moral conduct.

5. And of having pursued a course of Medical study in conformity with the regulations of the Court.

COURSE OF STUDY.

Every Candidate whose attendance on Lectures shall commence on or after the 1st of October, 1863, must attend the following Lectures and Medical Practice during not less than three winter and three summer sessions : each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October ; and each summer session to extend from May 1 to July 31.

First Year. — Winter Session. — Chemistry ; Anatomy and Physiology ; Dissections. Summer Session.—Botany ; Materia Medica and Therapeutics ; Practical Chemistry. (a)

Second Year.—Winter Session.—Anatomy and Physiology, including Dissections and Demonstrations ; Principles and Practice of Medicine ; Clinical Medical Practice. Summer Session.—Midwifery and Diseases of Women and Children. (b) Forensic Medicine and Toxicology ; Clinical Medical Practice.

Registration of Testimonials.—All testimonials must be given on a printed schedule, and the blanks therein must be filled up by the Lecturers themselves. Students will be supplied with schedules at the time of their first registration :—In London, at this Hall. In the Provincial towns, from the gentlemen who keep the Registers of the Medical Schools, and whose names may be known by application to the Secretary of this Court. All Students, in London, are required personally to register the several classes for which they have taken tickets ; and those only will be considered as complying with the regulations of the Court whose names and classes in the Register correspond with their schedules. Tickets of admission to Lectures and Medical Practice must be registered in the months of October and May. Due notice of the days and hours of such registrations will be given from time to time. The Court also require Students at the Provincial Medical Schools to register their names, in their own handwriting, with the Registrar of each respective School, within the first fifteen days of October and first fifteen days of May.

(a) By Practical Chemistry is intended a *specific* course of Instruction in the Laboratory, with an opportunity of Personal Manipulation in the ordinary processes of Chemistry, and of acquiring a knowledge of the various Reagents for Poisons.

(b) A Certificate of Attendance on not less than twenty cases will be received from a legally qualified Practitioner.

Examination in Arts.—An Examination in Arts will take place at the Hall three times in the year, viz., on the last Friday and Saturday in the months of January, April, and September. N.B.—By order of the Medical Council, an Examination in Arts is compulsory on all gentlemen commencing their studies on or after October 1, 1861, and must be passed previous to registration. Testimonials of proficiency in General Education will be received, as exempting from the Examination in Arts at this Hall from the following National Educational Bodies, and also from any of the Licensing Bodies under the Medical Act of 1858, viz.:—The Royal College of Physicians, London; the Royal College of Physicians, Edinburgh; the King and Queen's College of Physicians, Ireland; the Royal College of Surgeons, England; the Royal College of Surgeons, Edinburgh; the Faculty of Physicians and Surgeons of Glasgow; the Royal College of Surgeons, Ireland; and the Society of Apothecaries, London. A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council. Oxford Responsions or Moderations. Cambridge Previous Examinations. Matriculation Examination of the University of London. Oxford Middle Class Examinations (senior). Cambridge Middle Class Examination (senior). Durham Middle Class Examination (senior). Durham Examinations for Students in Arts, in their second and first years. Durham Registration Examination for Medical Students. Dublin University Entrance Examination Queen's University, Ireland, two years' Arts' Course for the Diploma of Licentiate in Arts. Preliminary Examinations at the end of A.B. course. Middle Class Examinations. Matriculation Examinations. First Class Certificate of the College of Preceptors. "Testamur" granted by Codrington College, Barbadoes. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a Certificate that the Student has been Examined in Latin and Mathematics.

Professional Examinations.—The Court of Examiners meet in the Hall every Thursday, where Candidates are required to attend at a quarter before four o'clock. Every person intending to offer himself for Examination must give notice in writing to the Clerk of the Society on or before the Monday previous to the day of Examination, and must at the same time deposit all the required testimonials (as before specified) with the fee at the office of the Beadle, where attendance is given every day, except Sunday, from ten to four o'clock; Saturday ten to two o'clock. The examination of Candidates is divided into two parts, and is conducted partly in writing and partly *viva voce*.

First Examination, which may be passed after the Second Winter Session, embraces the following subjects:—Latin of the Pharmacopœia and Physicians' Prescriptions; Anatomy and Physiology; General and Practical Chemistry; Botany and Materia Medica.

Second Examination, after the Third Summer Session (the five years' pupilage being completed):—Practice of Medicine and Pathology; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

The Court of Examiners have determined that all Graduates in Medicine of a British University be in future admitted to a practical Examination in the Practice of Medicine and Midwifery only.

The Examination of Candidates for certificates of qualification to act as Assistant, in compounding and dispensing medicines will be as follows;—In translating Physicians' Prescriptions and the Pharmacopœia Londinensis; in Pharmacy and Materia Medica.

By the 22nd section of the Act of Parliament, no rejected Candidate can be re-examined until the expiration of six months from his former Examination; and no rejected Candidate as an Assistant until the expiration of three months.

Fees.—For a Certificate of Qualification to practise, six guineas; for an Assistant's Certificate, two guineas.

Students' Prizes.—The Society of Apothecaries annually offer two prizes for proficiency in the knowledge of Botany, and also two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry.

The Prizes consist of a Gold Medal awarded to the Candidate who distinguishes himself the most in the Examination; and of a Silver Medal, and a Book to the Candidate who does so in the next degree.

The Examination in Botany will be held at the Hall of the Society on the second Wednesday in August, at ten in the forenoon, and will be conducted by printed papers and *viva voce* questions. Each gentleman intending to compete for these Prizes must send a written notice of his intention to the Beadle, on or before August 1, which notice must be accompanied by evidence of his having entered upon the Second Summer Session of his Medical Studies, and by Certificates from his teachers of his having attended their respective Lectures and Class Examinations with diligence and regularity. The Examinations in Materia Medica and Pharmaceutical Chemistry will be held at the Hall of the Society on the second Wednesday, and on the following Friday in October, from ten in the forenoon to one in the afternoon of each day, by printed papers on the Wednesday, and by *viva voce* questions on the Friday. Each gentleman intending to compete for these Prizes must send a written notice of his intention to the Beadle on or before October 1, which notice must be accompanied by evidence of his having entered upon the Third Winter Session of his Medical Studies, and by Certificates from his teachers of his having attended their respective Lectures and Class Examinations with diligence and regularity.

ARMY MEDICAL DEPARTMENT.

Director-General—Dr. Gibson, C.B., Honorary Physician to Her Majesty.

Head of Sanitary Branch.—Dr. Logan, C.B., Inspector-General of Hospitals, Honorary Physician to Her Majesty.

Head of Statistical Branch.—Dr. Balfour, F.R.S., Deputy-Inspector-General.

Head of Medical Branch.—Dr. Mapleton, F.R.C.P., Deputy-Inspector-General.

Staff Surgeons. —Dr. Crauford, Dr. Irvine, and Mr. Fitzgerald, and Assistant-Surgeon Jates, attached to the office.

Chief Clerk.—Walter Bassano, Esq.

The name of no gentleman can be placed on the list of Candidates who does not possess a legal qualification to practise Medicine as well as Surgery in Great Britain or Ireland.

Competitive Examinations for Assistant Surgeoncies take place in February and August of each year. The successful Candidates proceed to the Army Medical School at Netley to attend a four months' course before they are finally approved as Assistant-Surgeons.

The Candidates must be unmarried, not beyond twenty-six years of age, nor under twenty-one years.

Licences and Diplomas must be lodged at the office for examination and registry at least one week before the Candidate appears for examination; likewise certificates of moral conduct and character—one of them by the parochial minister, if possible. Baptismal certificates in which the date of birth is given are required at the same time; and if the parish register cannot be resorted to, an affidavit from one of the parents, or from some near relative who can attest the fact, will be accepted.

Note.—All communications to the Director-General, not prepaid, to be forwarded, addressed *outside* to "The Under-Secretary of State for War," with the words, "Army Medical Department," at the left-hand corner.

1. The grades of Medical officers in the Army are four in number, viz.:—

(1.) Inspector-General of Hospitals. (2.) Deputy-Inspector-General of Hospitals. (3.) Staff or Regimental Surgeon; who, after twenty years' full-pay service in any rank, shall be styled Surgeon-Major. (4.) Staff or Regimental Assistant-Surgeon.

2. No Assistant-Surgeon is eligible for promotion to the rank of Surgeon, until he shall have passed such examination as our principal Secretary of State for War may require, and shall have served on full-pay with the commission of Assistant-Surgeon for five years, of which two shall have been passed in or with a regiment.

3. Assistant-Surgeons are, as a general rule, promoted to the rank of Surgeon in the order of their seniority in the service, unless unfit for the discharge of their duties from physical or Professional incompetence, or misconduct. In cases of distinguished service, however, an Assistant-Surgeon may be

promoted without reference to seniority; and in such cases, with a view to insure the responsibility attaching to an appointment made out of the regular course of promotion, the recommendation in which the services of the officer shall be detailed, and be published in the general orders of the Army and in the *Gazette* in which his promotion appears.

4. The rates of pay per day of the Medical officers of the Army are in accordance with the following Schedule:—

Rank.	After 30 years' Service on Full-pay.	After 25 years' Service on Full-pay.	After 20 years' Service on Full-pay.	After 15 years' Service on Full-pay.	After 10 years' Service on Full-pay.	After 5 years' Service on Full-pay.	Under 5 years' Service on Full-pay.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Inspector-General	2 5 0	2 5 0	2 0 0*	..	..	..	..
Deputy-Inspector-General	1 14 0	1 10 0	1 8 0*	..	..	..	..
Surgeon-Major ..	..	1 5 0	1 2 0	..	..	..	..
Surgeon	..	..	..	0 18 0	0 15 0*	..	..
Assistant-Surgeon	..	..	..	..	0 13 0	0 11 6	0 10 0

* Or on promotion, should these periods of service not be already completed.

5. All Medical Officers of the rank of Surgeon-Major, Surgeon, or Assistant-Surgeon, are placed on the retired list when they shall have attained the age of 55 years, and all Inspectors-General, and Deputy Inspectors-General, when they shall have attained the age of 65 years.

Officers thus superannuated are entitled to half-pay, according to the following table:—

Rank.	After 30 years' Service on Full-pay.	After 25 years' Service on Full-pay.	After 20 years' Service on Full pay.	After 15 years' Service on Full-pay.	After 10 years' Service on Full-pay.	After 5 years' Service on Full-pay.	Under 5 years' Service on Full-pay.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Inspector-General	1 17 6	1 13 6	1 10 0	..	..	..	..
Deputy-Inspector-General	1 5 6	1 2 6	1 1 0	..	..	..	..
Surgeon-Major ..	..	0 18 6	0 16 6	..	..	..	..
Surgeon	..	..	..	0 13 6	0 11 0	..	..
Assistant-Surgeon	..	..	..	..	0 10 0	0 8 0	0 6 0

NAVY MEDICAL DEPARTMENT.

Director-General of the Medical Department of the Royal Navy.—Sir John Liddell, Kt., M.D., C.B., F.R.S.

REGULATIONS FOR CANDIDATES FOR THE OFFICE OF ASSISTANT-SURGEON IN THE ROYAL NAVY.

A Candidate for entry into the Royal Navy shall make a written application to that effect, addressed to the Secretary of the Admiralty; on the receipt of which application he will be furnished with the Regulations and a printed form, to be filled up by him, to show if he possesses the required qualifications.

As vacancies occur, the number of Candidates required will be ordered to attend at the Admiralty Office, bringing with them the requisite certificates, showing that they are fully qualified by age, Professional ability, etc., when they will be examined by a Board of Medical officers, to be named by their Lordships.

That no person be admitted as an Assistant-Surgeon in the Royal Navy who shall not produce a certificate of being registered under the Medical Act, and a Diploma from one of the Royal Colleges of Surgeons of England, Edinburgh, or Dublin, from the Faculty of Physicians and Surgeons of Glasgow, from Trinity College, Dublin, or from other Corporate Body legally entitled to grant a diploma in Surgery; nor as a Surgeon unless he shall produce a certificate from one of the said Colleges, Faculty, or Corporate Body, founded on an examination to be passed subsequent to his appointment of Assistant-Surgeon as to his fitness for the situation of Surgeon in the Navy; and in every case the person producing such Diploma and Certificate shall also undergo a further examination, touching his qualifications in all the necessary branches and points of Medicine and Surgery, both at the time of his entry and after serving three years to render himself eligible for Surgeon; and that previously to the admission of Assistant-Surgeons into the Navy, it will be required that they produce proof of having received a preliminary classical education, and that they possess, in particular, a competent knowledge of Latin; also

That they are of good moral character; the certificate of which must be signed by the clergyman of the parish, or by a magistrate of the district.

That they have served an apprenticeship, or have been engaged for not less than six months in Practical Pharmacy.

That their age be not less than twenty years, or more than twenty-six years.

That they have actually attended a recognised Hospital for eighteen months subsequently to the age of eighteen, in which Hospital the average number of patients is not less than one hundred.

That they have been engaged in actual dissections of the human body twelve months, the certificate of which from the teacher must state the number of subjects or parts dissected by the Candidate.

That they have attended Lectures, etc., on the following subjects, at established schools of eminence, by Physicians or Surgeons of the recognised Colleges of Physicians and Surgeons, in the United Kingdom, for periods not less than hereunder stated; observing, however, that such Lectures will not be admitted if the teacher shall lecture on more than one branch of science, or if the Lectures on Anatomy, Surgery, and Medicine be not attended during Winter Sessions of six months each:—Anatomy 18 months; or General Anatomy 12 months, and Comparative Anatomy 6 months. General Surgery 12 months, or Military Surgery 6 months, and General Surgery 6 months. Theory of Medicine 6 months, Practice of Medicine 6 months; if the Lectures on the Theory and Practice of Medicine be given in conjunction, then the period required is 12 months. Clinical Lectures (at an Hospital as above) 12 months; on the Practice of Medicine 6 months, on the Practice of Surgery 6 months. Chemistry 6 months; or Lectures on Chemistry 3 months, and Practical Chemistry 3 months. Materia Medica, 6 months. Midwifery 6 months, accompanied by certificates stating the number of Midwifery cases personally attended. Botany 3 months.

A favourable consideration will be given to Candidates who have obtained the degree of M.D. at either of the Universities of Oxford, Cambridge, Edinburgh, Dublin, Glasgow, London, or Aberdeen; or who, by possessing a knowledge of the diseases of the eye, and of any branch of science connected with the Profession, such as Medical Jurisprudence, Natural History, Natural Philosophy, etc., appear to be more peculiarly eligible for admission into the service.

By the rules of the service, no Assistant-Surgeon can be promoted to the rank of Surgeon until he shall have served five years (two years of which must be in a ship actually employed at sea), and can produce a certificate from one of the before-mentioned Colleges, Faculty, or Corporate Body; and it is resolved that not any certificate of Examination from any of the aforesaid Institutions shall be admitted toward the qualification for Surgeon, unless the certificate shall be obtained on an Examination passed after a period of not less than three years' actual service; observing, that no one can be admitted to an Examination for Surgeon, unless, as hereinbefore mentioned, he can produce a certificate, together with the most satisfactory proof, that he has performed, on the dead body, under the superintendence of a professor or teacher of known eminence, all the capital operations of Surgery, and is perfectly competent to perform any operation with skill and dexterity, and thoroughly acquainted with the anatomy of the parts involved in such operation; without which qualification no one hereafter can be promoted to the higher branches of the service; and whenever Assistant-Surgeons already in the service (whose Professional education may not be in accordance with the above) obtain leave to study previously to their passing for Surgeon, they will be required, on their Examination, to produce testimonials of their having availed themselves of the period of leave to complete their education agreeably to these regulations generally.

The rates of full-pay for the Medical officers of the Royal Navy are in accordance with the following Schedule:—

Rank.	After 30 years' Service on Full-pay.	After 25 years' Service on Full-pay.	After 20 years' Service on Full-pay.	After 15 years' Service on Full-pay.	After 10 years' Service on Full-pay.	After 5 years' Service on Full-pay.	Under 5 years' Service on Full-pay.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Inspector - General of Hospitals and Fleets	2 5 0	2 5 0	2 0 0*	..	..	..	..
Deputy Inspector-General of Hospitals and Fleets	1 14 0	1 10 0	1 8 0*	..	..	..	..
Staff Surgeon ..	..	1 5 0	1 2 0	..	..	..	..
Surgeon	..	..	..	0 18 0	0 15 0*	..	..
Assistant - Surgeon	..	..	..	..	0 13 0	0 11 6	0 10 0

All Medical officers with the ranks of Staff-Surgeon, Surgeon, and Assistant-Surgeon will be placed on the retired list when they shall have attained the age of 60 years. Deputy Inspectors-General will be placed on such retired list when they shall have attained the age of 65 years, and Inspectors-General when they shall have attained the age of 70 years. Officers thus superannuated will receive half-pay according to the following table:—

Rank.	After 30 years' Service on Full-pay.	After 25 years' Service on Full-pay.	After 20 years' Service on Full-pay.	After 15 years' Service on Full-pay.	After 10 years' Service on Full-pay.	After 5 years' Service on Full-pay.	Under 5 years' Service on Full-pay.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Inspector - General of Hospitals and Fleets	1 17 6	1 13 6	1 10 0*	..	..	..	..
Deputy Inspector-General of Hospitals and Fleets	1 5 6	1 2 6	1 1 0*	..	..	..	..
Staff Surgeon ..	..	0 18 6	0 16 6	..	..	..	..
Surgeon	..	..	..	0 13 6	0 11 6*	..	..
Assistant - Surgeon	..	..	..	..	0 10 0	0 8 0	0 6 0

* Or on promotion, should these periods of Service not have been already completed.

RULES AND REGULATIONS OF THE EXAMINING MEDICAL BODIES IN SCOTLAND.

UNIVERSITY OF EDINBURGH.

STATUTES RELATIVE TO GRADUATION IN MEDICINE.

I. Three Medical Degrees are conferred by the University of Edinburgh, viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The Degree of Master in Surgery is not conferred on any person who does not also at the same time obtain the degree of Bachelor of Medicine.

II. The preliminary branches of Extra-Professional Education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and the proficiency of Students in these branches is ascertained by examination, as far as possible, prior to the commencement of their Medical study.

III. No Candidate is admitted to a Professional Examination who has not passed a satisfactory Examination on at least two of the following subjects, in addition to the subjects mentioned above:—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy; and the Examination on these latter subjects also takes place, as far as possible, before the Candidate has entered on his Medical Curriculum.

IV. A Degree in Arts (not being an Honorary Degree) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University, specially recognised for this purpose by the University Court, exempts from all Preliminary Examination.

V. No one is admitted to the Degree of Bachelor of Medicine or Master in Surgery who has not been engaged in Medical and Surgical study for four years,—the Medical Session of each year, or *Annus Medicus*, being constituted by at least two Courses of not less than 100 Lectures each, or by one such Course, and two Courses of not less than 50 Lectures each, with the exception of the Clinical Courses, in which Lectures are to be given at least twice a-week during the prescribed periods.

VI. Every Candidate for the Degrees of M.B. and C.M. must give sufficient evidence by certificates—

1. That he has studied each of the following departments of Medical Science during Courses including not less than 100 Lectures, viz.:—Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Children,—two Courses of Midwifery of three months each being reckoned equivalent to a six months' Course, provided different departments of Obstetric Medicine be taught in each of the Courses,—and General Pathology, or in Schools where there is no such Course, a three months' Course of Lectures on Morbid Anatomy, together with a supplemental Course of Practice of Medicine or Clinical Medicine; Practical Anatomy, six months; Practical Chemistry, three months; Practical Midwifery, three months at a Midwifery Hospital, or a certificate of attendance on six cases from a Registered Medical Practitioner; Clinical Medicine, Clinical Surgery, during Courses of six months or two Courses of three months, Lectures being given at least twice a-week; Medical Jurisprudence, Botany, and Natural History, including Zoology, during Courses including not less than fifty Lectures.

2. That he has attended for at least two years the Medical and Surgical Practice of a General Hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons.

3. That he has been engaged for at least three months, by apprenticeship or otherwise, in compounding and dispensing drugs at the Laboratory of an Hospital, Dispensary, Member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.

4. That he has attended for at least six months, by apprenticeship or otherwise, the Out-Practice of an Hospital or the Practice of a Dispensary, Physician, Surgeon, or Member of the London or Dublin Society of Apothecaries.

VII. The studies of Candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to the following regulations:—

1. One of the four years of Medical and Surgical study, required by Section V., must be in the University of Edinburgh.

2. Another of such four years of Medical and Surgical study must be either in the University of Edinburgh or in some other University entitled to give the Degree of Doctor of Medicine.

3. Attendance during at least six winter months on the Medical or Surgical Practice of a General Hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on Courses of Lectures, as above prescribed.

4. One year's attendance on the Lectures of Teachers of Medicine in the Hospital Schools of London, or in the School of the College of Surgeons in Dublin, or of such Teachers of Medicine in Edinburgh or elsewhere, as shall from time to time be recognised by the University Court, may be reckoned as one of such four years, and to that extent shall be held as attendance on Courses of Lectures, as above prescribed.

5. Candidates may, to the extent of four of the departments of Medical study required by Section VI., Sub-Section 1, attend in such year or years of their Medical and Surgical studies, as may be most convenient to them, the Lectures of the Teachers of Medicine specified in the foregoing Sub-Section 4.

6. All Candidates, not Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh must, at the commencement of each year of such attendance, enrol their names in

a book to be kept by the University for that purpose, paying a fee of the same amount as the Matriculation fee paid by Students of the University, and having, in respect of such payment, a right to the use of the Library of the University.

7. The fee for attendance on the Lectures of an Extra-Academical Teacher in Edinburgh, with a view to Graduation, must be of the same amount as that exigible by Medical Professors in the University.

8. No Teacher is recognised who is at the same time a Teacher of more than one of the prescribed branches of study, except in those cases where Professors in the University are at liberty to teach two branches.

9. It is not necessary for any Teacher, attendance on whose Lectures is now recognised for the purposes of Graduation in the University, to obtain a new recognition from the University Court; and attendance on the Lectures of every such Teacher will continue to be recognised as heretofore.

10. It is in the power of the University Court, if they shall see cause, at any time to withdraw or suspend the recognition of any Teacher or Teachers.

VIII. Every Candidate must deliver, before the thirty-first day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—

1. A declaration, in his own handwriting, that he has completed his twenty-first year; and that he will not be, on the day of Graduation, under articles of apprenticeship to any Surgeon or other master.

2. A statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

3. A Thesis composed by himself, to be approved by the Medical Faculty.

IX. Each Candidate is examined, both in writing and *viva voce*,—first, on Chemistry, Botany, and Natural History; secondly, on Anatomy, Institutes of Medicine, and Surgery; and thirdly, on Materia Medica, Pathology, Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, and Medical Jurisprudence. The Examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, and Natural History are conducted, as far as possible, by Demonstrations of objects placed before the Candidates; and those on Medicine and Surgery in part by Clinical Demonstrations in the Hospital.

X. Students who profess themselves ready to submit to an Examination on the First Division of these subjects at the end of their second year may be admitted to Examination at that time.

XI. Students who have passed their Examination on the First Division of these subjects may be admitted to Examination on the Second Division at the end of their third year.

XII. The Examination on the Third Division cannot take place until the Candidate has completed his fourth *Annus Medicus*.

XIII. Candidates may, if they choose, be admitted to Examination on the first two of these Divisions at the end of their third year; or to the three Examinations at the end of their fourth year.

XIV. If any Candidate at these Examinations be found unqualified, he cannot be again admitted to Examination unless he has studied during another year two of the prescribed subjects, either in the University, or in some other School of Medicine.

XVIII. The Degree of Doctor of Medicine may be conferred on any Candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of twenty-four years, and has been engaged, subsequently to his having received the Degree of Bachelor of Medicine, for at least two years in attendance on an Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice: Provided always, that the Degree of Doctor of Medicine shall not be conferred on any person, unless he be a Graduate in Arts of one of the Universities of England, Scotland, or Ireland, or of such other Universities as are above specified, or unless he shall, before or at the time of his obtaining the Degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory Examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects, namely, French, German, Higher Mathematics, and Natural Philosophy.

XIX. The Medical Examiners for all Candidates for Graduation in Medicine are the Professors in the Faculty of Medicine, and, in addition three persons appointed annually by the University Court.

XX. The Provisions of these Statutes came into operation on February 4, 1861.

XXI. Persons, who began their Medical Studies before February 4, 1861, are entitled to graduate under the system in force before or after that date, according as they may comply with the regulations in force in the University before or after that date.

UNIVERSITY OF ABERDEEN.

The regulations for granting Medical Degrees are framed in conformity with an Ordinance of the Universities' (Scotland) Commissioners, dated March 16, 1861, and approved by Her Majesty in Council.

The following are the Degrees in Medicine granted by this University, namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The Preliminary Examination and Professional Curriculum and Examination for the Degrees of M.B., C.M., and M.D., being in conformity with the Ordinances of the Scotch Universities' Commissioners, are the same as those of the Universities of Edinburgh, Glasgow, and St. Andrews.

The studies of Candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to these regulations:—

One at least of the four years of Medical and Surgical study must be in the University of Aberdeen.

Another of such four years must be either in this University, or in some other University entitled to give the Degree of Doctor of Medicine.

FEES FOR GRADUATION.

1. Each Candidate for the Degree of M.B. shall pay a fee of five guineas in respect of each of the three Professional Examinations; each such fee of five guineas being payable at the time at which the Candidate comes forward to be examined in that Division in respect of which it is payable.

2. If the Candidate desires to be admitted to the Degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but if he desires to be admitted to the Degree of Master in Surgery also, he shall, on being admitted to such Degree, pay a further fee of five guineas.

3. And every Candidate for the Degree of Doctor of Medicine shall pay, in addition to the fees paid by him for the Degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

EXEMPTION FROM THE FOREGOING REGULATIONS.

Students who shall have begun their Medical studies before the first Tuesday of November, 1861, will be entitled to graduate under the regulations applicable to Medical Students in force before that date.

Further information may be obtained from the Secretary to the Medical Faculty, Professor Ogilvie, M.D.

UNIVERSITY OF ST. ANDREWS.

The regulations for granting Medical Degrees are framed in conformity with an Ordinance of the Universities' (Scotland) Commissioners, they therefore generally correspond with those of the Universities of Edinburgh, Aberdeen, and Glasgow.

The Degrees in Medicine granted by the University of St. Andrews are those of Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The Preliminary Examination and Professional Curriculum and Examinations for these degrees are generally the same as those of the Universities of Edinburgh, Aberdeen, and Glasgow. The following regulations, however, for Candidates for the Degrees of Bachelor of Medicine and Master of Surgery present some difference:—

No one shall be received as a Candidate for the Degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of Medical and Surgical Study, as above defined, shall have been in one or more of the following Universities and Colleges, viz.:—The University of St. Andrews; the University of Glasgow; the University of Aberdeen; the University of Edinburgh; the University of Oxford; the University of Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

The remaining years of Medical and Surgical Study, other than those for which provision is made by the Ninth Section, may be either in one or more of the Universities and Colleges above specified, or in the Hospital Schools of London, or in the School of the College of Surgeons in Dublin, or under such private teachers of Medicine as may from time to time receive recognition from the University Court.

Attendance on the Lectures of any private teacher in Edinburgh, Glasgow, or Aberdeen, shall not be reckoned for graduation in St. Andrews, if the fee for such Lectures be of less amount than is charged for the like course of Lectures in the University of Edinburgh, of Glasgow, or of Aberdeen, according as the teacher lectures in Edinburgh, Glasgow, or Aberdeen.

Every Candidate for the Degrees of Bachelor of Medicine and Master in Surgery shall be examined both in Writing and *viva voce*,—First. On Chemistry, Botany, Elementary Anatomy, and Materia Medica. Secondly. On advanced Anatomy, Zoology with Comparative Anatomy, Physiology, and Surgery. And thirdly. On Practice of Medicine, Clinical Medicine, Clinical Surgery, Midwifery, General Pathology, and Medical Jurisprudence.

FEES FOR GRADUATION.

There shall be paid by each Candidate for the Degree of Bachelor of Medicine a fee of five guineas in respect of each of the three divisions of the Examination on Professional subjects; and if the Candidate desires to be admitted to the Degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but, if he desires to be admitted to the Degree of Master in Surgery also, he shall, on being admitted to such degree, pay a further fee of five guineas; and every Candidate for the Degree of Doctor of Medicine, who has previously obtained the Degree of Bachelor of Medicine, shall pay, in addition to the fees paid by him as a Candidate for the Degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

N.B.—The Degree of Doctor of Medicine may be conferred by the University of St. Andrews on any registered Medical Practitioner above the age of forty years, whose Professional position and experience are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on Examination, satisfy the Medical Examiners of the sufficiency of his Professional knowledge; provided always, that Degrees shall not be conferred under this Section to a greater number than ten in any one year. Any person presenting himself as a Candidate for the Degree of Doctor of Medicine under the above regulation without having previously obtained the Degree of Bachelor of Medicine, shall, on so presenting himself, pay a fee of fifty guineas, inclusive of the stamp duty. Further information may be obtained on application to the Rev. J. M'Bean, Secretary to the University.

UNIVERSITY OF GLASGOW.

Three Degrees in Medicine are granted by this University, which are respectively designated as follows, viz.:—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). [The Preliminary Examination, Curriculum, and Professional Examinations for these degrees being in conformity with the Ordinance of the Scottish University Commissioners, are the same as for the Universities of Edinburgh, St. Andrews, and Aberdeen.]

Of the four years constituting the Curriculum, one at least shall have been passed in the University of Glasgow, and another either in that University or some other University entitled to give Degrees in Medicine.

These Statutes apply to all Candidates who commenced their Medical studies on or after October 1, 1861. Candidates who began their Medical studies before that date are entitled to obtain their Degrees according to the regulations existing at the time when they commenced their studies.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

President.—Dr. David Craigie.
Secretary.—Dr. Rutherford Haldane.

REGULATIONS RELATING TO ADMISSION TO THE FELLOWSHIP.

Fellows.—No one can be elected a Fellow of the College till he has obtained the Degree of Doctor of Medicine. Graduates of Foreign Universities must previously submit to an examination before the Examiners of the College.

Non-resident Fellows.—The mode of election of a Non-resident is the same as that of a Resident Fellow. In his petition he engages, if he come to reside in Edinburgh, to fulfil the whole conditions which the College does or may require of Resident Fellows; but another ballot must take place before he is admitted to that grade by the College. The fees for a Resident Fellowship amount to £88, and for a Non-resident to the same sum, both inclusive of the stamp-duty to Government.

Licentiates.—All applicants for the Licence are required to appear before the Examiners of the College, and to pass the prescribed Examination.

The stamp-duty on the Diploma having been remitted, the fee payable by Licentiates is now £10 10s.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS TO BE OBSERVED BY CANDIDATES FOR THE DIPLOMA.

PROFESSIONAL EDUCATION.

Candidates commencing Professional study after October 1, 1861, must have been engaged in Professional study during four years after the Examination in General Education, which shall include not less than four Winter Sessions' or three Winter and two Summer Sessions' attendance at a recognised Medical School. (a)

The Candidate must have attended the following separate and distinct Courses of Lectures:—

Anatomy, 2 Courses (b), six months each. Practical Anatomy, twelve months. Chemistry, 1 Course, six months. Practical or Analytical Chemistry, 1 Course, three months. Materia Medica, 1 Course, three months. Physiology, not less than fifty Lectures.(c) Practice of Medicine, 1 Course, six months. Clinical Medicine, six months. (d) Principles and Practice of Surgery, 1 Course, six months. Clinical Surgery, 1 Course, six months. (d) In addition to the above Courses of Surgery and Clinical Surgery, one Course of either of these at the option of the Student, 1 Course, six months. (d) Midwifery and the Diseases of Women and Children, 1 Course, three months. Medical Jurisprudence, 1 Course, three months. Besides the above-mentioned Courses of Lectures, the Candidate must have attended at least six cases of Labour under the superintendence of a qualified Medical Practitioner, and must also have attended, for three months, a Course of Instruction in Practical Pharmacy.

The Candidate must have attended, for twenty-four months, a Public General Hospital containing at an average at least eighty patients. He must also have attended, for six months, the Practice of a Public Dispensary specially recognised by the College; or have been engaged for six months as Visiting Assistant to a Registered Practitioner.

A certificate of three months' instruction in Pathological Anatomy at the post-mortem room of a recognised Hospital will be required from Candidates commencing Professional Study after October 1, 1861.

A Certificate of proficiency in Vaccination, signed by a Registered Practitioner, will be required of every Candidate.

The six months' Courses delivered in Scotland must consist of not fewer than 100 Lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' Courses must consist of not fewer than fifty Lectures.

REGISTRATION.

A book shall be kept in the Hall of the College for the registration of all Medical Students who may apply. In this book all Edinburgh students who desire to possess the Diploma of the College must be registered, whether they attend Professors in the University or other qualified Teachers.

(a) In consequence of the proceedings of the General Medical Council in May, 1862, this regulation will not take effect until further notice. Candidates are at present admitted to Examination after four Winter Sessions' or three Winter and two Summer Sessions' attendance at a recognised Medical School.

(b) The two Courses must not be simultaneous.

(c) In those Schools of England and Ireland in which two separate Courses of Lectures are delivered at separate hours, one on Anatomy, the other on Anatomy and Physiology, the former of these Courses will be received as one of the two Courses of Anatomy required by the College, and the other as the Course of Physiology.

(d) Two Courses of Clinical Medicine of three months each, if not simultaneous, will be held equivalent to one Course of six months. They must be attended during the period of attendance at the Hospital where they are delivered. The same rules apply to Clinical Surgery.

No Student beginning Professional study after September, 1861, can be registered who has not passed the Preliminary Examination in General Education accepted by the College, or one of the equivalent Examinations.(e)

PRELIMINARY EXAMINATION IN GENERAL EDUCATION.

Candidates commencing their Professional studies after October 1, 1861, must satisfy the Examiners in General Education that they have a competent knowledge of the following branches of study:—1. English—Composition, and Writing to Dictation. 2. Latin. 3. Arithmetic—To Vulgar and Decimal Fractions, inclusive. 4 and 5. Any two of the following, at the option of the Candidate: (1) Algebra; (2) Geometry—Euclid, Books I., II., and III; (3) Natural Philosophy; (4) Greek; (5) French; (6) German; (7) Botany; (8) Zoology.

Testimonials of proficiency granted by certain Educational Bodies shall be accepted as sufficient evidence of General Education, and shall exempt from the Preliminary Examination.

After September, 1861, all Candidates for the Diploma of the College must pass the examination in General Education before they commence their Professional studies. The time of commencing Professional study is understood to be the time of commencing study at a Medical School.(f)

Candidates who commenced their Professional studies before October 1, 1861, may pass the Preliminary Examination in General Education at any of the periods previous to the first Professional Examination. Candidates under this regulation, who have not passed a Preliminary Examination in General Education, will be required to undergo that Examination on the day before the First Professional Examination, and shall pay a fee of £1.

PROFESSIONAL EXAMINATIONS FOR THE DIPLOMA OF THE COLLEGE.

Candidates for the Diploma of the College shall be subjected to two Professional Examinations, to be conducted at separate sittings, partly in writing and partly orally.

The fee for the Diploma of the College is £10.

Note.—The fee payable for the Diploma by Apprentices of those who were Fellows of the College prior to the Charter of 1851 is £5.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Course of Study.—1. Anatomy: Two Six Months' Courses. 2. Practical Anatomy: Twelve Months. 3. Institutes of Medicine or Physiology: Not less than fifty Lectures. 4. Chemistry: One Course, Six Months. 5. Practical or Analytical Chemistry: One Three Months' Course. 6. Practice of Medicine: One Six Months' Course. 7. Principles and Practice of Surgery: One Six Months' Course. 8. Clinical Medicine. 9. Clinical Surgery: One Six Months' Course of each, embracing at least two Lectures weekly, which must be attended simultaneously with attendance on the practice of the corresponding department of the Hospital at which they are delivered. 10. Materia Medica: One Three Months' Course. 11. Medical Jurisprudence: One Three Months' Course. 12. Midwifery and the Diseases of Women and Children: One Three Months' Course. 13. Practical Midwifery: Attendance on at least Six Cases of Labour. 14. Practical Pharmacy, Three Months' Practical Instruction. 15. Pathological Anatomy or General Pathology at the post-mortem room of a recognised Hospital: Three Months' Course. 16. Hospital and Dispensary Practice: Twenty-four Months' Attendance on the Practice of a Public General Hospital, containing on an average at least eighty patients; and also Six Months' Attendance on the Practice of a Public Dispensary specially recognised by the Faculty.

Candidates for the Diploma of the Faculty must produce evidence of being twenty-one years of age, and of good moral character.

Candidates commencing Professional study after October 1, 1861, must have been engaged in Professional study during four years, which shall include not less than four Winter Sessions, or three Winter and two Summer Sessions' attendance at a recognised Medical School.

The Examination for the Diploma is divided into two parts. Anatomy, Physiology, and Chemistry are the subjects of the first division of the Examination. The Second Examination embraces all the other subjects of the course. The fee for the Diploma is £10—£4 for the First and £6 for the Second Examination.

At present all Candidates for the Diploma are required to have a knowledge of Latin and Natural Philosophy. Those now beginning their Professional course will be required to pass a Preliminary Examination, and be registered in terms of the Ordinances of the General Medical Council.

All necessary particulars may be obtained on application to the Registrar.

FACULTY OF MEDICINE IN IRELAND.

UNIVERSITIES, COLLEGES, COURSES OF STUDY, DEGREES, AND LICENCES TO PRACTISE.

The following Bodies grant one or more Degrees or Licences to practise Medicine or Surgery, and provide courses of instruction in the Medical Sciences:—The University of Dublin grants the Degrees of M.B. or Bachelor of Medicine; M.D. or Doctor of Medicine; M.C. or Master of Surgery; also Licences in Medicine (L.M.) and Surgery (L.S.). The Queen's University in Ireland, with its Provincial Colleges at Belfast, Cork, and Galway; this University confers the Degree of M.D. The King and Queen's College of Physicians in Ireland, granting a Licence and Fellowship. This Institution, in connexion with the Medical Faculty of the University of Dublin, constitutes the School of Physic in Ireland. The Royal College of Surgeons in Ireland, which grants Letters Testimonial qualifying to practise Surgery as a Licentiate, and also confers a Fellowship. Fellows and Licentiates of the Colleges of Physicians and Surgeons may obtain from their respective Colleges a Diploma in Midwifery. The Rotunda and Coombe Lying-in Hospitals grant Diplomas in Midwifery, which are, however, not recognised under the Medical Act. The Governor and Company of the Apothecaries' Hall of Ireland.

The Medical Session in Ireland commences about the first week in November.

UNIVERSITY OF DUBLIN.

DEGREES.

The Degrees conferred by the University of Dublin are,—1. Bachelor in Medicine; 2. Doctor in Medicine; 3. Master in Surgery. To obtain any of these the Student must first have obtained an A.B. Degree. A Licence in Medicine and Surgery are also given, to obtain either of which the Student must have completed one year in Arts.

1. The Medical education of a Bachelor of Medicine is of four years' duration, and comprises attendance on the following Courses of Lectures:—

COURSES OF SIX MONTHS' DURATION OR LONGER.

Anatomy and Physiology; Practical Anatomy with Dissections; Surgery; Chemistry; Materia Medica and Pharmacy; Institutes of Medicine and Pathology; Practice of Medicine; Midwifery.

Clinical Lectures. — Attendance on Sir Patrick Dun's Hospital during nine months, with three consecutive Courses of Clinical Lectures, each of three months' duration. Also nine months' attendance on some General Hospital in Dublin, approved by the Board, in which Clinical Instruction in Medicine and Surgery is delivered.

COURSES OF THREE MONTHS' DURATION.

Botany.—In the first week of April, and continued during the months of May and June.

Practical Chemistry; Medical Jurisprudence.

Any of the above-named Courses may be attended at any Medical School in Dublin recognised by the Provost and Senior Fellows; (and three of them, at the discretion of the Candidate, may be attended in the University of Edinburgh), provided the Candidate have kept an *Annus Medicus* in the School of Physic.

(e) In consequence of the proceedings of the General Medical Council in May, 1862, this regulation will not take effect until further notice.

(f) In consequence of the proceedings of the General Medical Council in May, 1862, the regulations contained in Section 3, Chapter V., will not take effect until further notice. Candidates are, notwithstanding, recommended to pass the Examination in General Education before commencing Professional study.

Total amount of fees for the Degree of M.B., £10.

2. Doctor in Medicine.—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the Degree of M.B. for three years, and must perform exercises for the Degree before the Regius Professor of Physic, in accordance with the Rules and Statutes of the University.

Total amount of fees for this Degree, £12.

3. Master in Surgery.

The Curriculum is the same as that for the Licentiate in Surgery, viz., Anatomy and Physiology, two courses; Practical Anatomy, three courses; Surgery, two courses; Chemistry, one course; Practical Chemistry, one course; Materia Medica, one course; Practice of Medicine, one course; Midwifery, one course; Botany, one course; Medical Jurisprudence, one course; with the addition of one Session of nine months' attendance on an Hospital having at least twenty beds for cases of fever. A Special Certificate for such attendance will be required.

In addition to the subjects of Examination required for the Licentiate, Candidates for the Degree of Master in Surgery will be examined specially in the following subjects:—Comparative Anatomy, Medical and Surgical Pathology, Animal Chemistry, Ophthalmic Surgery

Total amount of fees for the Degree of Ch.M., £10.

MEDICAL SCHOLARSHIPS.

Two Medical Scholarships are given annually by the Board of Trinity College, value £20 per annum each, tenable for two years. The Examinations for which are held each year in June, in the following subjects:—Anatomy, Physiology, Chemistry, Materia Medica, and Botany. (a)

MEDICAL SCHOOL EXHIBITIONS.

The Professors of the University School give three Exhibitions annually, two senior, value £15 and £10, open to all students who have been three years attending the School. The subjects being,—Practice of Medicine, Surgery, Pathology, Midwifery, and Forensic Medicine.

One Junior, value £15.—The time and subjects of Examination being the same as those for the Medical Scholarships.

THE QUEEN'S UNIVERSITY IN IRELAND,

granting the Degree of M.D., is the centre or head of the Queen's Colleges of Belfast, Cork, and Galway, each of which possesses a Faculty of Medicine. The curriculum of Medical study extends over a period of four years, and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Natural History, Anatomy and Physiology, Practical Anatomy, Materia Medica and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Medical Jurisprudence. Candidates are required to attend also, during the first period, Practical Chemistry in a recognised Laboratory, and the Practice during six months of a Medico-Chirurgical Hospital, containing at least sixty beds, together with Clinical Lectures delivered therein; during the second period, three months' Practical Midwifery in a recognised Hospital with not less than thirty beds, or six months' Practical Midwifery in a recognised Hospital with fifteen beds; and eighteen months' Practice of a Medico-Chirurgical Hospital, containing at least sixty beds, and in which Clinical Instruction is delivered. At least one-third of the Courses of Medical Lectures must be attended in some one of the Queen's Colleges; the remainder may be taken at the option of the Candidate, in any University, College, or School recognised by the Senate of the Queen's University. Candidates are required before graduating to have also attended in one of the Colleges of the Queen's University, Lectures on Natural Philosophy, and on one Modern Language, and to have passed the Matriculation Examination. There are two University Examinations: one comprising the subjects of study in the first period, the other the subjects of the second period. Candidates may, if they prefer to do so, pass both these Examinations at the same time. The University Examinations are held twice in each year, in June and September. Further information will be found in the "Queen's University Calendar," or may be obtained by application to the Secretary, Queen's University, Dublin Castle.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

REGULATIONS RESPECTING THE EDUCATION, EXAMINATION, AND ADMISSION OF CANDIDATES FOR THE LICENTIATESHIP IN MEDICINE.

Candidates for the Licentiateship in Medicine are required to give proof of their having attained the age of twenty-one years, of having been engaged during a period of four years in the study of Medicine, at a School or Schools recognised by the College, and shall also produce evidence of having studied the following subjects, viz., Anatomy, Physiology, Practical Anatomy, Chemistry, Practical Chemistry, Materia Medica, and Botany, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, Midwifery, and of having attended a Medico-Chirurgical Hospital, in which regular courses of Clinical Lectures are delivered, together with Clinical Instruction for twenty-seven months, or such Hospital for eighteen months, with nine months' attendance on a Medical Hospital, and similar courses of Clinical Lectures and Clinical Instruction; the attendance in each case being for not more than nine months in any year,—namely, for six winter and three summer months, and the attendance on a Medico-Chirurgical Hospital and Medical Hospital not being taken out in the same year, and of having attended Practical Midwifery for six months.

Candidates who are not personally known to any Fellow of the College are required to transmit testimonials of character from registered Physicians or Surgeons.

The Examination is divided into two parts:—

First Part.—Anatomy, Physiology, Botany, and Chemistry.

Second Part.—Materia Medica, Practice of Medicine, Medical Jurisprudence, and Midwifery.

Students may be examined in the subjects of the first part at the termination of the first period of study; or in all the subjects of their education, on the completion of their Medical studies.

Candidates are required to have passed an Examination in the following subjects of preliminary education before the Board of Examiners of this College, previous to or within the first two years of their Professional studies; or to have passed, within the period specified, an Examination in General Education, held by some of the qualifying Bodies, or by some one of the National Education Bodies, approved by the College:—

English—Composition. Modern Languages—French or German. Greek. Latin. Mathematics—Elucid, First and Second Books. Arithmetic.

Students in Arts, of one year's standing, of any University in the United Kingdon, requiring Examinations in the first year; Graduates or Licentiates in Medicine or Surgery of any University or College in Great Britain or Ireland, will be exempted from the Preliminary Examination.

The above regulations respecting Preliminary Examination, will not apply to Candidates who have commenced their Professional education previously to January 1, 1861.

Candidates qualified as follows are required to undergo the second part of the Professional Examination only, viz.:—1. Graduates in Medicine of a University in the United Kingdom, or of any foreign University approved by the College. 2. Fellows, Members, or Licentiates of the Royal Colleges of Physicians of London or Edinburgh. 3. Graduates or Licentiates in Surgery.

Licence in Midwifery.—Members of the College who may desire to obtain the Licence in Midwifery will be required to undergo a special Examination.

Candidates for the Licence in Midwifery, who are not Members of the College, will be admitted to Examination for such Licence in Midwifery on the following qualifications:—The Degree or Licence in Medicine or Surgery from any University or College of Physicians or Surgeons in the United Kingdom, together with a certificate of having attended a six months' Course of Lectures on Midwifery, with the attendance for six months at a recognised Lying-in Hospital, or of having attended Practical Midwifery for six months.

Fees for Licence and Examinations.—The fee for the Licence is £15 15s., which may be divided as follows, viz.:—For Examination at the termination of the first period of study, £5 5s. The Final Examination for the Licence, £10 10s. Fee for the Midwifery Diploma, £3 3s. Fee for the Preliminary Examination, 5s.

(a) To compete for a Scholarship the student must be not more than of two years' standing, and must have completed one full year in Arts.

The Admission fee, with the exception of two guineas deducted to meet the expense of Examination, will be returned to any Candidate who may be rejected.

ROYAL COLLEGE OF SURGEONS, IRELAND.

President.—William Colles.
Vice-President.—Josiah Smyly.
Secretary of the College.—Edward Hutton.
Secretary of the Council.—James S. Hughes.
Curator.—John Barker.
Registrar.—John Brennen.

COUNCIL.

Arthur Jacob.
William Hargrave.
Robert Adams.
James Barker.
Hans Irvine.
Edward Hutton.
Robert Pentland.
Samuel G. Wilmot.
R. G. H. Butcher.
Awly P. Banon.
Peter Shannon.
Rawdon Macnamara.
Hamilton Labatt.
Benj. McDowel.
Edward Ledwich.
William Jameson.
Alexander Carte.
William Healy.
J. H. Wharton.

Court of Examiners.—Jerome Morgan, Christopher Fleming, M. H. Stapleton, B. W. Richardson, Edward A. Stoker, G. H. Porter, T. J. Tufnell.

Examiners in Midwifery.—Robert Johns, Edward Quinan, Henry Croly.

Examiners in Preliminary Education.—Thomas Byrne, John Murray, George F. Shaw.

Fellows of the College are Members of the Corporation, and are admitted by examination. Letters Testimonial are granted to Licentiates, and a Diploma in Midwifery to Fellows and Licentiates educated and examined in that branch of Surgery.

Candidates for the Fellowship must be 25 years of age, and must give proof of liberal preliminary education and good conduct during Professional education. They are required to produce certificates of Surgical studies for six years (three of which must be for exercises in Dublin), and also of practice as House-Surgeon or Dresser in an Hospital; as well as certificates of attendance on Hospitals, Lectures, and Dissections, as required from Licentiates; with the addition of Botany, Comparative Anatomy, and Natural Philosophy. Fee, £26 5s.; if the Candidate be a Licentiate, £10 10s.

Candidates for Letters Testimonial are required to produce certificates of preliminary classical education, of four years' Professional study (three of them in Metropolitan Schools), also three years' attendance on Hospital Practice and Dissections. Fee, £21.

Candidates for the Midwifery Diploma must be Fellows or Licentiates of the College, are required to produce certificates of attendance on Midwifery Lectures and Practice, with proof of having attended thirty cases of Parturition.

Candidates for the Fellowship and Letters Testimonial are publicly examined on two separate days in Anatomy, Physiology, Surgery, Practice of Medicine, and Pharmacy. The Examiners are elected by a sworn jury of the Council appointed by lot, Teachers being ineligible.

By a new Bye-law it is enacted that—"Certificates of attendance on Lectures and of the performance of Dissections shall be received from Professors and Lecturers in all Universities, Colleges, and recognised Schools in Her Majesty's dominions, as qualifications for the Fellowship and Letters Testimonial of this College; and also certificates of attendance on all Hospitals recognised by the Council, where Clinical instruction is given."

APOTHECARIES' HALL OF IRELAND.

Governor.—Thomas Collins, Esq.
Deputy-Governor.—Robert Mulock, Esq.

The Court of Examiners.—Charles Holmes, Arthur Harvey, Charles Henry Leet, William Madden, sen., William Madden, jun., Henry P. Nolan, George B. Owens, John Shea, George Wyse, Jerome O'Flaherty, Christopher Shaw, John White, and Robert Montgomery, Esqs.

Secretary.—Charles H. Leet, M.D.

REGULATIONS REGARDING THE EDUCATION AND EXAMINATION OF CANDIDATES FOR THE LICENCE TO PRACTISE AS AN APOTHECARY.

Candidates for the Licence of the Hall must undergo a Preliminary and a Professional Examination.

PRELIMINARY GENERAL EDUCATION AND EXAMINATION.

Candidates for the Certificate in Arts (or for the Certificate of Apprentice) will be examined in Latin, Greek, French, Euclid, Algebra, Arithmetic, and in English History and Composition.

An Examination in Arts will be held in the Hall five times in the year, namely, upon the third Friday in April, in June, in August, in October, and in December, at the hour of two o'clock, p.m.

PROFESSIONAL EDUCATION AND EXAMINATION.

Candidates for the Licence to practise as an Apothecary must produce Certificates to the following effect:—

1. Of having passed the Preliminary Examination in Arts.
2. Of being twenty-one years of age, and of good moral character.
3. Indenture of Apprenticeship to a qualified Apothecary, or a Certificate from an Apothecary of having been engaged at Practical Pharmacy for a period of three years subsequent to having passed the Examination in Arts.
4. Of having spent four years in Professional study.
5. Of having attended the following Courses, viz.:—Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Materia Medica and Therapeutics, during one summer session; Practical Chemistry (in a recognised Laboratory), during three months; Principles and Practice of Medicine, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery (attendance upon twenty cases); Surgery, during one winter session; Medical Jurisprudence, during one summer session; Instruction in Vaccination.
6. Of having attended at a recognised Hospital or Hospitals in the United Kingdom the Practice of Medicine and Clinical Lectures on Medicine during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery during one of the winter and one of the summer sessions.

The Examination for the Licence to practise as an Apothecary is divided into two parts.

The First.—Chemistry, Botany, Anatomy, Physiology, Materia Medica, Therapeutics, and Pharmacy.

The Second.—Medicine, Surgery (Principles of), Pathology, Midwifery, Forensic Medicine, and Hygiene.

The first of these Examinations may be undergone at the close of the second Winter Session, and after the Candidate has attended the Courses upon the several subjects named for this Examination, and the second or final not before the completion of the fourth Winter Session.

The Licence of the Apothecaries' Hall, Dublin, entitles its possessor to be Registered as a Medical Practitioner, under "the Medical Act, 1858," and to practise Medicine and Pharmacy in any part of her Majesty's dominions.

The Governor and Court of Examiners meet at the Hall upon every Friday, where Candidates for the Licence to practise must attend at the hour of two o'clock, p.m.

Candidates for the Licence must lodge their testimonals, and enrol their names and address with the Clerk at the Hall, in Dublin, a week prior to the day of examination.

A rejected Candidate cannot be re-admitted to Examination until after the expiration of six months.

An Examination of Apprentices is held at the Hall, in the first week in May annually, upon some subject of Medical Chemistry, which is announced by the Council at the commencement of the previous winter session, and a Prize of five guineas is awarded to the successful competitor.

Doctors of Medicine of any of the Universities in the United Kingdom, or Surgeons of any of the Royal Colleges of Surgeons, who have served an Apprenticeship or the required term at Practical Pharmacy to a qualified Apothecary, and who desire to obtain the Licence of the Hall, will be required to undergo an Examination—the former in Pharmacy, and the latter in Medicine and Pharmacy; and in either case the Examination of the Candidate will be confined to one day's Examination.

Notice.—"A Register of Medical Students" lies in the care of the Clerk at the Hall, and will be opened upon the first day of each Winter and Summer Session, and will remain open for fifteen days, for the entry of the names of Medical Students who have passed the Preliminary Examination in Arts, and who have entered upon their Professional studies, in order that their names may be returned in due time to the Medical Council, in accordance with the ordinance of the General Medical Council of Education on June 23, 1860; and all Students about being registered must produce the certificate in Arts and cards of admission to the Lectures or Hospitals to which they have entered.

TO CORRESPONDENTS.

We beg to return our best thanks to the Registrars and Secretaries of the various Universities, Colleges, and Schools, for their prompt replies to our Circular, and for the trouble they have taken in supplying the latest Regulations of the Institutions with which they are connected.

In order to confine the whole of this week's Number to information specially important to Students, we are compelled to defer answers to several Correspondents, together with all notices of passing events, until next week.

Medical Times and Gazette.

SATURDAY, SEPTEMBER 19.

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THE OATH OF HIPPOCRATES.

As the shortening days and cooler evenings warn us of a waning year, so it again becomes our duty to prepare for the anniversary with which next month commences. The opening of the "annus Medicus" is at hand,—an eventful epoch to many, who will hereafter date from it years of study and observation, years spent in the help of their fellow-men, years almost always employed usefully, and often leading to positions of the highest esteem and reputation.

It has been our custom, in a full sense of the responsibility resting on us as guardians of professional honour and exponents of liberal opinions, to offer annually a few remarks such as the course of past events and the future prospects of our Profession might render appropriate. Last year we spoke of the scope and spirit of Medical study, contrasting book-work with the bedside, theory with practice, system and dogma with simple preservation of facts in their integrity. On this occasion we take for text the oldest and noblest of our corporate title-deeds, an heirloom bequeathed to succeeding generations by the father of Medicine, which in two thousand years has lost none of its freshness and cogency. It is still as fit to excite a generous ardour in the student planning his first approaches to the citadel of knowledge as it was in other times and under other dispensations. It is still as powerful a watchword to the tried and wary campaigner in our art as it was amid the olive groves of Attica before Christianity had developed itself to a wonder-stricken world. Therefore it is especially proper to stand as a confession of faith in which all men, all sects, and all races may unite. Every day makes Medicine more cosmopolitan, but no lapse of time can alter the duties and cancel the obligations which each man implicitly contracts to perform when he affiliates himself to a guild so practical, so ancient, and so illustrious.

The novice begins by promising "to reckon him who taught me this art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; by precept, lecture, and every other mode of instruction to impart a knowledge of the art to my own sons, and to disciples bound by a stipulation and oath according to the law of medicine." He then says: "I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor means of abortion to a woman. With purity and holiness I will pass my life and practise my art. Into whatever houses I enter I will go for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption, and from the seduction of females. Whatever in connection with my professional practice I see or hear in the life of men which ought not to be spoken abroad I will not divulge, reckoning that all such should be kept secret. While I continue to keep this oath inviolate, may it be granted to me to enjoy life and the practice of the art respected by all men in all times."

It can hardly fail to occur to every one who reads this noble composition, even in a translated form, what vast stores of ancient wisdom, what grand and statuesque monuments of primeval thought are open to those only whose early opportunities have given them the benefit of classical education. We could almost venture to raise a question on the issue of this single document,—whether a young man starting in the devious and thorny path of Medical practice would not be clearer in his views and firmer in his convictions of Professional right and wrong if his mind were fully penetrated with the spirit of this litany? Would he sin against the rules of honour and courtesy to his fellow-labourers whom he had learned "to look upon on the same footing as his own brothers?" could he set personal interest above strict Medical duty, after the injunction "to follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients?" Would he be so likely to tamper with secret remedies, so-called, as unfortunately some of our body condescend to do; or to raise domestic differences by indiscreet tattling, if the words of this formulary were ringing in his ears, and appealing to his conscience by their unanswerable truth and simplicity?

It would be well for the depreciators of classical study as a branch of Medical education to weigh closely the force of these arguments before depriving those under their control of this great preliminary advantage. There is the more value in the deduction, as it can hardly be denied that many students enter our Profession too young, and, like the adolescent recruit, break down under the labours of drill and weight of equipment which one more year of mental stature would have enabled them to carry with ease.

We shall advert somewhat later to a recent and melancholy example of this faulty routine. Here we need only record our sincere belief that if the youth destined to this career were to go on steadily and gently from the first with systematic study, a firm foundation of classical knowledge need not prevent such an intermixture of rudimentary teaching in physics and natural history as would aid him afterwards. He would thus ultimately make a better Practitioner than one who, hardly out of his nonage, had rushed prematurely to the incompetent exercise of a difficult Profession. The Universities are, of course, by far the most fitting field for such training; but, if these be out of question for social or economic reasons, it might still be practicable to devote the first two years after leaving school to instruction in languages, mathematics, and general science. The London University and its branches, both in town and country, are well designed to supply this existing need.

But perhaps we shall be met by adherents of the old routine asserting that a young man cannot too early begin to gain *experience*. Now, this we answer with a decided negative. Experience is a word of dangerous import in our department of knowledge. How often does one hear it predicated of some helpless and hopeless plodder who has been fumbling for half-a-century with a subject which he has never mastered, and which he never will master, for lack of intellectual elevation. What really does experience mean? Surely it is the result of the teaching of facts, long and laboriously collated on a mind prepared from the first to appreciate their value, and able, as they successively crop out, to assign them their order and importance. If the faculties are below par, if the mental "stand-point" be too low, not all the reiteration, not any of the luminous coincidences, not even the long-sustained evidence of incompatibility which half a life may have furnished, can fructify into a single result or add one new idea to the existing stock. The "experienced" men of this school are usually arrant bunglers, sunk in the abyss of habit and routine, tied hand and foot with "red tape;" men to whom familiarity with facts has brought fatigue and satiety, but not one spark of enlightenment.

"Such a man," says Dr. Graves in a fine passage quoted in his recently published biography, "has generally an overweening confidence in his own judgment; he never detects or is conscious of his own mistakes, and, instead of improvement, years bring only an increased attachment to his opinions—a deeper blindness in examining the results of his own practice." We can most strongly recommend the whole essay from which this passage is borrowed to our readers' thoughtful attention; more especially if they stand in the responsible position of launching sons, relatives, or friends on the ocean of Medical practice. Dr. Graves was, from his extensive travels in search of knowledge, singularly qualified to view the subject from an elevated and impartial point of view; and his opinions have been so well brought forward by his able biographer, that we were sincerely amazed at the depreciatory tone in which the work has been reviewed by an able but too querulous non-Medical contemporary.

The stronghold of this mistaken educational curriculum is the apprentice system. It is to us a matter of much satisfaction that recent legislation has lessened the evils of this institution, at least as regards our Profession. We regret that some authorities should adopt the mistaken course of defending and upholding them. The old relation of master to apprentice belongs essentially to days gone by, and to a state of our science long superseded. When Surgery was a handicraft, the makeweight to a barber's trade—when Medicine was represented by the vendor of drugs and culler of simples, perhaps it was natural that the tradesman should have an apprentice, and the shrewd possessor of secret or magic remedies should bind to him, by an agreement of servitude, the junior to whom he handed his stock and lore. But now these things are changed, and with the rise in our social position should come a contempt for degrading relations between teacher and taught. Let the Practitioner of note have pupils if he will, to be dealt with liberally, and to study under his guidance as gentlemen, but let him not seek to make them his servants, or claim power to imprison them in the city Bridewell when disobedient.

As matter of fact apprenticeship is too often useless to the learner, sometimes absolutely injurious. As generally conducted it begins at the wrong end, by setting the raw youth to work at the practical part of his future profession before he has learned the laws and theory on which such practice is founded; and in less favourable cases it fills his head with one or two routine processes of treatment to which he is apt to stick for ever after, from mere force of unreasoning habit. "I always," says he, "adopt such and such a course of treatment, because I used to see it done by my governor." This will go on even when research has corrected, and fresher scientific knowledge has condemned the method in question; much as we even now meet occasionally with a believer in the antique dietetic doctrines of Abernethy. We affirm positively, and from personal observation, that time thus spent might have been better and more cheaply passed in systematic education.

The biographical sketch of Dr. Pardey, of Southampton, to which we promised reference above, is a case in point. It was noticed in our columns a fortnight back, though not strictly in reference to the present subject. As a pupil of the South Hants Infirmary he had many more advantages than falls to the lot of most apprentices; but one cannot help regretting that the five years spent there before going up to King's College and the London University were not otherwise occupied. It is not impossible that the early disease and death which closed his career might have been averted, or, at least postponed, had his labours been distributed over a longer period at a less intense pressure of application. His biographer, Dr. Bullar, makes some judicious comments on the fact, which we extracted in our number of September 5. It is true we cannot altogether acquit the University of London itself of a tendency to encourage unwholesome cramming; the examinations, in themselves excellent, come very close upon one another, and often require such varied information on a multiplicity of subjects as renders this process indispensable for success. Perhaps the best way in which a dangerous, because temporary mental stretch could be lessened, is to be found in spreading the same amount of work over a longer space of time, to the diminution of the so-called practical studies which now precede it.

We cannot, in conclusion, sum up the remarks which have been offered, and add another argument in favour of extended general education, better than by citing again from the great author of the Aphorisms:—"Whoever," he says in the Nomos, or Law, "is to acquire a competent knowledge of medicine ought to be possessed of the following advantages:—a natural disposition, instruction, a favourable position for the study, early tuition, love of labour, and leisure. First of all a natural talent is required; for when Nature opposes, everything else is vain, but when Nature leads the way to what is most excellent, instruction in the art takes place, which the student must try to appropriate to himself by reflection, becoming an early pupil at a place well adapted for instruction. He must also bring to the task a love of labour and perseverance, so that the instruction taking root may bring forth proper and abundant fruits."

THE DAYS AND HOURS OF INTRODUCTORY LECTURES

TO BE DELIVERED AT THE DIFFERENT MEDICAL SCHOOLS IN THE METROPOLIS.

	Days and Hours.	
St. Bartholomew's Hospital Medical Coll.	Oct 1, 4	Mr. Paget.
Charing-cross Hospital and College ..	,, 3	Mr. C. W. Heaton.
St. George's Hospital Medical School ..	,, 2	Mr. Henry Lee.
Guy's Hospital	,, 2	Dr. Pavy.
King's College Medical Department ..	,, 8	Professor Garrod.
London Hospital Medical and Surgical College	,, 3	Mr. Maunder.
St. Mary's Hospital Medical School ..	,, 8	Dr. Markham.
The Middlesex Hospital Medical College	,, 8	Mr. Nunn.
St. Thomas's Hospital Medical and Surgical College	,, 3	Mr. Sydney Jones.
University College Faculty of Medicine	,, 3	Professor Reynolds.
Westminster Hospital and Medical School	,, 8	Mr. Christopher Heath.

PRIVATE TEACHERS IN LONDON.

Mr. Allingham, F.R.C.S. (Exam.), Surgical Tutor at St. Thomas's Hospital, will re-commence his classes early in October, at 36, Finsbury-square, E.C.

Dr. **Barron** gives courses of Medical and Surgical tuition adapted to Students for Professional Examination, at his Class-room, 16, St. Thomas's-street East, Borough.

Mr. C. W. **Heaton**, Lecturer on Chemistry to Charing-cross Hospital, prepares pupils for the Examinations of the University of London, and other Examining Boards, both by class demonstrations and private lessons.

Samuel Highley, F.G.S., F.C.S., etc., On the Use of the Microscope, Scientific Educational Museum, 18, Green-street, Leicester-square, W. Evening class at eight o'clock. Fee, One Guinea. Also on Mineralogy, Geology, Zoology, and on Photography in its application to Natural History and Pathology.

Mr. G. **Hind**, F.R.C.S., gives daily demonstrations and examinations at 29, Newman-street, Oxford-street.

The Drs. **Power** continue their classes for the Competitive and Pass Examinations at the Junior Medical College, 32, Queen-square, Bloomsbury, W.C.

Dr. **Steggall** gives instructions to Medical Students in all the branches of their studies, at his residence, 2, Southampton-street, Bloomsbury-square.

Mr. **Tuson** continues his instructions and demonstrations in Anatomy, Physiology, Pathology, and Surgery, daily, at his residence, 6, Devonshire-street, Portland-place. The examinations and demonstrations are illustrated by recent dissections, models, and anatomical preparations.

TABLES

GIVING THE NAMES OF LECTURERS, HOURS OF LECTURE, DAYS OF ATTENDANCE, AND FEES IN THE METROPOLITAN MEDICAL SCHOOLS AND HOSPITALS.

LECTURES.	ST. BARTHOLOMEW'S.								CHARING CROSS.								ST. GEORGE'S.							
	Lecturers.	Days and Hours.	Fees.						Lecturers.	Days and Hours.	Fees.						Lecturers.	Days and Hours.	Fees.					
			1 Course		2 Courses		Perpetual.				1 Course		2 Courses		Perpetual.				1 Course		2 Courses		Perpetual.	
			£	s.	£	s.	£	s.			£	s.	£	s.	£	s.			£	s.	£	s.	£	s.
WINTER SESSION.																								
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Black Dr. Kirkes	M 2.30 Tu and Th 3 30	5	5	..		7	7	Dr. Chowne Dr. Willshire	M W F 2.30	4	4	6	6	7	7	Dr. Pitman	..	6	6	..		6	6
SURGERY	Mr. Lawrence Mr. Coote	M W F 3.30	5	5	..		7	7	Mr. Hancock	M W F 12.30	3	3	5	5	6	6	Mr. Tatum	..	4	4	..		6	6
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Skey Mr. Holden	Tu W Th F 2.30	5	5	7	7	10	10	Mr. Canton	M Tu W Th F 9	4	4	6	6	7	7	Mr. Holmes Mr. Rouse	..	6	6	..		8	8
ANATOMICAL DEMONSTRATIONS.	Mr. Callender Mr. Smith	Daily 10½ till 2	3	3	5	5	..		Dr. Goldsbro'	Daily	2	2	4	4	4	4	Mr. Freeman Mr. T. Edgelow	..	..		..		..	
GENERAL ANATOMY AND PHYSIOLOGY	Mr. Savory	M Tu Th F 9.30	5	5	7	7	10	10	Dr. Salter	M Tu W Th F 3.30	4	4	6	6	7	7	Dr. W. Ogle	..	6	6	..		8	8
CHEMISTRY	Dr. Frankland Dr. Odling	M F 10.30 W 10	5	5	..		7	7	Mr. Heaton	M W F 10	5	5	6	6	7	7	Dr. Noad	..	6	6	..		8	8
NATURAL PHILOSOPHY ..	..	..	..		..		..		..	W Th F 11.15	3	3	..		..		..	..	..		..		..	
HOSPITAL PRACTICE—																								
Physicians	Dr. Burrows Dr. Farre Dr. Jeaffreson	M Tu Th S 1.30 M W F 10 M W F 8 Th 1	12	12	18	18	26	5	Dr. Chowne Dr. Willshire	Daily 1	10 6 mths	10	15 12 mths	15	21	0	Dr. Page Dr. Pitman Dr. Fuller Dr. Barclay Dr. R. Lee, *obs.*	Daily 1	8 6 mths	8	16 1 year	16	25	4
Assistant-Physicians ..	Dr. Black Dr. Kirkes Dr. Martin Dr. Edwards Dr. Harris	M Tu Th 1 Tu F 11 M Th 11 S 11 W 11	..		..		..		Dr. H. Salter Dr. Headland	12 to 2	..		..		..		Dr. J. Ogle Dr. Wadham	..	..		..		..	
Surgeons	Mr. Lawrence Mr. Skey Mr. Wormald Mr. Paget	Tu F S 1.30 M Th 1 S 1.30 M Th S 1.30 M Tu Th F S 1.30	15	15	21	0	26	5	Mr. Hancock Mr. Canton	Daily 1	10 6 mths	10	15 12 mths	15	21	0	Mr. Tatum Mr. P. Hewett Mr. Pollock Mr. H. Lee	Daily 1	15 6 mths	15	21 1 year	0	42	0
Assistant-Surgeons	Mr. Coote Mr. Holden Mr. Savory Mr. Callender	W S 12 M Th 12 F 12 Tu 12	..		..		..		Mr. Hird Mr. Barwell	12 to 2	..		..		..		Mr. Holmes Mr. Brodhurst	..	..		..		..	
Physician-Accoucheur ..	Dr. Greenhalgh	W 1.30 S 9	..		..		..		..	..	..		..		..		..	..	.		..		..	
CLINICAL MEDICINE ..	Dr. Burrows Dr. Farre Dr. Black	Alt Tu 12 Alt W 9	..		..		..		By the Physicians	..	..		..		..		By the Physicians	..	..		..		..	
CLINICAL SURGERY ..	Mr. Lawrence Mr Skey Mr. Paget	M 1 Th 1.30 S 9	..		..		..		By the Surgeons	..	..		..		..		By the Surgeons	..	..		..		..	
DISEASES OF WOMEN ..	Dr. Greenhalgh	Alt W 9	..		..		..		..	..	..		..		..		..	..	..		..		..	
MORBID ANATOMY AND PATHOLOGY	Dr. Andrews The Surgeons	12	..		..		..		..	..	..		..		..		Dr. Ogle Mr. Lee	..	..		..		..	
SUMMER SESSION.																								
MATERIA MEDICA	Dr. Farre	Tu W Th S 10	5	5	..		6	6	Dr. Steggall	M W F 9	3	3	5	5	6	6	Dr. Barclay	..	5	5	..		6	6
BOTANY	Dr. F. Harris	M W S 9	3	3	..		4	4	Mr. E. Head, M.B.	M W F 10	2	2	3	3	4	4	Mr. M Masters	..	3	3	..		4	4
FORENSIC MEDICINE ..	Dr. Martin	M F 10 Th 11	3	3	..		4	4	Mr. Hird Mr. Tuson	M W F 4	2	2	3	3	4	4	Dr. Fuller	..	3	3	..		4	4
MIDWIFERY	Dr. Greenhalgh	Tu W F S 8.30	5	5	..		6	6	Dr. Chowne	M W Th 8	3	3	5	5	6	6	Dr. R. Lee	..	5	5	..		6	6
PRACTICAL CHEMISTRY ..	Dr. Frankland Dr. Odling	M Tu Th F 10.15 to 1	2	2	..		3	3	Mr. Heaton	M W F 11	2	2	..		..		Dr. Noad	..	4	4	..		..	
COMPARATIVE ANATOMY ..	Mr. Callender	Tu F 2.30 *Summer*	2	2	..		3	3	Mr. Barwell	Tu Th S 3.30	3	3	..		4	4	Dr. Ogle, *with Physiology*	..	..		..		..	
DRESSERSHIPS	..	..	12 3 mths	12	18 6 mths	18	26 1 year	5	..	..	..		..		..		..	..	..		..		..	
DENTAL SURGERY	..	..	..		..		..		..	..	..		..		..		Mr. Vasey	..	1	1	..		..	
OPERATIVE SURGERY ..	Mr. Callender Mr. Smith	..	..		..		..		..	..	..		..		..		Mr. Holmes	..	4	4	..		..	
PRACTICAL PHARMACY ..	Mr. Wood	..	..		..		..		..	..	..		..		..		..	..	..		..		..	
Entrance to the Lectures and Hospital Practice for the Licences of the Col. of Phys. and Soc. of Apoth., and the M.R.C.S. Exam.	..	..	..		..		99	15	..	..	..		..		75	12	Compounding Fee	..	..		..		100 90	0 0
To the Lectures only	..	..	..		..		52	10	..	..	..		..		44	2	..	..	..		..		..	

LECTURES.	GUY'S.					KING'S COLLEGE AND HOSPITAL.					LONDON.				
			Fees.					Fees.					Fees.		
	Lecturers.	Days and Hours.	1 Course	2 Courses	Perpetual.	Lecturers.	Days and Hours.	1 Course	2 Courses	Perpetual.	Lecturers.	Days and Hours.	1 Course	2 Courses	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
PRINCIPLES AND PRACTICE OF MEDICINE	Dr. Owen Rees Dr. Gull	M W F 3.30	5 5	..	..	Dr. G. Johnson	Tu S 4 Th 5	7 7	..	7 7	Dr. Parker.	Tu Th S 10.15	5 5	.	6 6
SURGERY	Mr. Hilton Mr. Birkett	Tu Th S 3.30	5 5	..	..	Mr. Fergusson	M W F 5	5 5	..	7 7	Mr. Hutchinson	M Tu F 3	5 5	..	6 6
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Poland Mr. C. Forster	M Tu Th F 9	5 5	..	..	Mr. Partridge	Daily 9	6 6	..	9 9	Mr. Adams	M Tu Th F 9.15	5 5	..	8 8
ANATOMICAL DEMONSTRATIONS	Mr. W. Moxon, M.B. Mr. Bankart Dr. Fagge	Daily 9 to 4	5 5	..	..	Mr. Wood *Ass.-Demonsts.* Mr. Sherwin Mr. Bellamy Mr. Bell	..	..	..	..	Mr. Little Mr. Rivington	Daily 10.3	5 5	..	8 8
GENERAL ANATOMY AND PHYSIOLOGY	Dr. Pavy	Tu Th S 12.30	5 5	..	..	Dr. L. Beale	M W Th F 4	6 6	..	9 9	Mr. J. Couper Dr. Hughlings Jackson	M W 4 Th 3	4 4	..	6 6
CHEMISTRY	Dr. Alf. Taylor	Tu Th S 11	5 5	..	..	Dr. Miller Mr. Hadow *dem*	M W Th S 10.15	7 7	..	9 9	Dr. Letheby	M W F 10.30	7 7	..	7 7
HOSPITAL PRACTICE—															
Physicians	Dr. Barlow Dr. Owen Rees Dr. Gull Dr. Oldham *obs.*	M F 1.30 W S 1.30 Tu F 1.30 Tu Th 1.30	10 10 3 mths	15 15 6 mths	26 5	*In-patients—* Dr. Johnson Dr. Beale Dr. Garrod *Out-patients—* Dr. Guy Dr. Priestley, *obs.*	M W F 1.30 Tu Th S 9 Tu Th S 1.30 M W F 1 Tu Th S 1.30	10 10 6 mths	15 15 18 mths	21 0	Dr. Fraser Dr. Davies Dr. Parker Dr. Barnes, *obs.*	Daily 8 or 1 Tu 2, W S 1	6 6 6 mths	11 11 12 mths	20 0
Assistant-Physicians ..	Dr. Habershon Dr. Wilks Dr. Pavy Dr. J. B. Hicks *obs.*	M 12 W 12 F 12 Th S 12 M F 1.30	..	..	..	Dr. C. Evans Dr. A. Duffin Dr. E. S. Thompson Dr. Liveing Dr. Playfair *obs.* Mr. Day, *obs.*	M W F 1 win M W F 1 Tu Th S 1 Tu Th S 1 Tu Th S 12.30 win Tu Th S 12.30 sum	..	..	..	Dr. A. Clark Dr. Ramskill Dr. Down	Daily 1	..	..	..
Surgeons	Mr. Cock Mr. Hilton Mr. Birkett Mr. Poland	M Th S 1.30 M Th 1.30 M F 1.30 W S 1.30	10 10 3 mths	15 15 6 mths	26 5	Mr. Fergusson Mr. Partridge	Tu Th S 1.30 M W F 1.30	15 15 6 mths	21 0 21 mths	26 5	Mr. Adams Mr. Curling Mr. Hutchinson	Daily 1	8 8 6 mths	18 18 18 mths	25 0 3 years
Assistant-Surgeons ..	Mr. C. Forster Mr. Bryant Mr. A. Durham Eye Wards	S 12 M Th 12 W 12 M Th 1.30	..	..	..	Mr. Wood Mr. H. Smith Mr. Mason Mr. Watson	Th Th S 1 sum M W F 1 M W F 1 Tu Th S 1	..	..	..	Mr. Maunder Mr. Couper Mr. Little Mr. Rivington	Daily 1	..	..	..
CLINICAL MEDICINE ..	*Winter—* Dr. Barlow Dr. O. Rees Dr. Gull *Summer—* Dr. Habershon Dr. Wilks Dr. Pavy	Weekly Weekly	..	..	..	Dr. Johnson Dr. Beale Dr. Garrod	Every alt. M 2 p.m. S 9 Every alt. Tu 2 p.m.	..	..	..	By the Physicians	..	..	..	..
CLINICAL SURGERY ..	*Winter—* Mr. Cock Mr. Hilton Mr. Birkett Mr. Poland *Summer—* Mr. C. Forster Mr. Bryant Mr. Durham	Weekly Weekly	..	..	..	Mr. Fergusson Mr. Partridge	Every alt. Th 2 p.m. Every alt. F 2 p.m.	..	..	..	By the Surgeons	..	..	..	..
DISEASES OF WOMEN ..	Dr. Oldham Dr. Hicks	Weekly	.	..	..	..	..	..	..	..	..	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	Dr. Wilks	Daily 2.30 S 8.45 sum	..	..	..	Dr. Beale, Physicians & Surgeons	Tu 4 sum	2 2	..	..	Mr. Little	..	..	..	..
SUMMER SESSION.															
MATERIA MEDICA	Dr. Habershon	Tu Th S 3	4 4	..	..	Dr. A. B. Garrod	Tu W Th F 8 a.m.	4 4	..	6 6	Dr. H. Davies	M W F 9·15	3 3	..	4 4
BOTANY	Mr. Johnson	Tu Th S 11.30	4 4	..	..	Mr. Bentley	M Tu Th F 12.15	3 3	..	4 4	Dr. Dresser	M W F 10	3 3	..	4 4
FORENSIC MEDICINE ..	Dr. A. Taylor	Tu Th S 10	4 4	..	..	Dr. Guy	M Tu W F 3	3 3	..	4 4	Dr. Ramsbotham Mr. Rodgers	Daily exc. Sat 10.15	3 3	..	4 4
MIDWIFERY	Dr. Oldham Dr. B. Hicks	Tu W Th F 8.45 a.m.	5 5	..	..	Dr. W. O. Priestley	M W Th F 9	6 6	..	6 6	Dr. Ramsbotham	M Tu Th F 3	4 4	..	6 6
PRACTICAL CHEMISTRY ..	..	M W F 10 to 1	4 4	..	..	Mr. C. L. Bloxam	Daily 10.15	4 4	..	8 8	Dr. Letheby	M W F 11.15	2 2	..	..
COMPARATIVE ANATOMY ..	Dr. Pavy Dr. Moxon	Tu S 12.30	4 4	..	..	Mr. R. Jones	M W F 4	3 3	..	4 4	Dr. L. Down	Th 9.15	2 2	..	..
PRACTICAL HISTOLOGY ..	..	..	..	..	..	..	..	..	..	..	Mr. Couper Dr. Hughlings Jackson	..	..	..	..
NATURAL PHILOSOPHY ..	Dr. Fagge	W 12 win.	..	..	..	..	..	..	..	..	..	..	..	..	..
OPERATIVE SURGERY ..	Mr. Bryant	W 2	..	..	..	..	..	..	..	..	Mr. Maunder	..	..	..	..
DENTAL SURGERY	Mr. Salter	..	..	..	..	Mr. Cartwright	Tu F 9	6 6	..	8 8	Mr. Barrett	..	2 2	..	..
CUTANEOUS DISEASES ..	Dr. Habershon	Tu 1	..	..	..	..	..	..	..	..	..	..	..	..	..
OPHTHALMIC SURGERY ..	Mr. Poland Dr. Bader	M 8.45 a.m.	..	..	..	..	..	..	..	..	Mr. J. Hutchinson	Tu S 9	..	..	..
USE OF MICROSCOPE ..	Mr. Durham	M 12.30	..	..	..	..	..	..	..	..	..	..	..	..	..
TUTOR'S CLASS	Dr. Moxon Mr. Bankart Dr. Hilton Fagge	..	..	..	..	..	Daily 5 win 9 sum	3 3	..	..					..

Fee for Hospital Practice and Lectures, first year, £40; second year, £40; and £10 for each succeeding year. A Perpetual Ticket, £100.

Fee for Lectures required by College and Hall 61 19

Ditto, including Hospital Practice and Matriculation .. .. £99 6s. 6d.

Fees for the Lectures and Hospital Practice, for the Licences of the Royal College of Physicians, Society of Apothecaries, and the Royal College of Surgeons 88 4

To the Lectures alone 50 0

LECTURES.	ST. MARY'S					MIDDLESEX.					ST. THOMAS'S.				
			Fees.					Fees.					Fees.		
	Lecturers.	Days and Hours.	1 Course	2 Courses	Per-petual.	Lecturers.	Days and Hours.	1 Course	2 Courses	Per-petual.	Lecturers.	Days and Hours.	1 Course	2 Courses	Per-petual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
MEDICINE	Dr. Chambers	M W Th 4	4 4	..	6 6	Dr. Stewart Dr. Goodfellow	Tu Th S 9	6 6	..	6 6	Dr. Peacock	Tu Th S 2	..	..	..
SURGERY	Mr. Lane Mr. Spencer Smith	Tu F 4 W 3	4 4	..	6 6	Mr. Shaw	M W F 9	4 4	..	6 6	Mr. Le Gros Clark	Tu Th F 3	..	..	..
DESCRIPTIVE & SURGICAL ANATOMY	Mr. Gascoyen	M Tu Th F 2.45	6 6	..	8 8	Mr. Moore	Daily ex. S 12	6 6	..	10 10	Mr. S. Jones	Daily exc. S 12	..	..	..
ANATOMICAL DEMONSTRATIONS	Mr. Norton Mr. Philps	Daily	3 3	..	..	Dr. R. Liveing	Tu Th 3	4 4	..	6 6	Mr. Rainey Mr. Croft	Daily 9 to 3	..	..	..
PHYSIOLOGY	Dr. Broadbent	M Tu Th F 9	6 6	..	8 8	Mr. de Morgan	M W F 4	4 4	..	6 6	Dr. Brinton	M Th S 4	..	..	..
CHEMISTRY	Dr. Matthiessen	Tu Th S 10.15	5 5	..	7 7	Mr. T. Taylor Mr. Heisch	M W F S 11	6 6	..	8 8	Dr. Bernays	Tu Th S 10.30	..	..	..
HOSPITAL PRACTICE:															
Physicians	*In-patients—* Dr. Alderson Dr. Chambers Dr. Sibson *Out-patients—* Dr. H. Jones Dr. Sieveking Dr. Markham Dr. T. Smith, *obs.*	 M Th 1.15 W S 1.15 Tu F 1.15 M Th 12.30 Tu F 12.30 W S 12.30 Tu S 1.30	7 7 6 mths	12 12 1 year	21 0	Dr. Stewart Dr. Goodfellow Dr. H. Thompson Dr. J. Hall Davis, *obs.*	Daily 1 W S 1	10 10 6 mths	16 16 18 mths	21 0	Dr. Barker Dr. J. R. Bennett Dr. Goolden Dr. Peacock Dr. Bristowe Dr. Brinton Dr. Barnes, *obs.*	..	..	..	..
Assistant-Physicians ..	..	..	..	..	..	Dr. Murchison Dr. Greenhow Dr. J. B. Sanderson	..	..	..	..	Dr. Clapton Dr. Gervis, *obs.*	..	..	..	..
Surgeons	*In-patients—* Mr. Lane Mr. Ure Mr. Spencer Smith *Out-patients—* Mr. H. Walton Mr. J. Lane Mr. Gascoyen Mr. Ernest Hart, *opht.* Mr. Toynbee *aural*	 Tu F 1.15 M Th 1.15 W S 1.15 W S 12.30 Tu F 12.30 M Th 12.30 Tu S 1.30 M Th 1.30	9 9 6 mths	21 0 1 year	31 10	Mr. Shaw Mr. de Morgan Mr. Moore Mr. Nunn Mr. Soelberg Wells, *opht.*	Daily 1 M Th S 12.30	12 12 12 mths	18 18 3 years	21 0	Mr. Solly Mr. Le Gros Clark Mr. Simon				
Assistant-Surgeons	..	..	..	..	..	Mr. Hulke Mr. Lawson	..	..	..	..	Mr. S. Jones	..	..	..	..
CLINICAL MEDICINE ..	Dr. Alderson Dr. Chambers Dr. Sibson	2ce a-week	..	..	..	The Physicians The Phys-Acc.	bi-wkly 3 M 10	..	..	..	Dr. Barker Dr. Bennett Dr. Goolden Dr. Bristowe Dr. Peacock Dr. Brinton	*Winter—* M 2 W 2 W 2 W 2 *Summer—*	..	..	..
CLINICAL SURGERY ..	Mr. Lane Mr. Ure Mr. Spencer Smith	2ce a-week	..	..	..	The Surgeons. The Oph-Surg.	bi-wkly 3 S 10	..	..	..	By the Surgeons	F 2	..	..	..
DISEASES OF WOMEN ..	..	..	..	..	..	..	..	..	..	..	Dr. Barnes Dr. Gervis	..	..	..	..
MORBID ANATOMY AND PATHOLOGY	Mr. Chisholm	..	..	..	..	Mr. Sibley Dr. Murchison	Tu Th 4	2 2	..	3 3	Dr. E. Montgomery	Daily 2.30	..	..	..
SUMMER SESSION.															
MATERIA MEDICA.	Dr. Sieveking	Tu W Th F 8 a.m	4 4	..	6 6	Dr. H. Thompson	M W F 9	3 3	..	5 5	Dr. Bristowe	..	..	..	..
BOTANY	Dr. Dresser	M W F 12	3 3	..	4 4	Dr. T. S. Cobbold	M W F 2	3 3	..	4 4	Dr. Clapton	..	..	..	..
FORENSIC MEDICINE ..	Dr. Randall	M Tu Th 10	3 3	..	4 4	Dr. Greenhow	Tu Th S 9	3 3	..	5 5	Dr. Stone	..	..	..	..
MIDWIFERY	Dr. Tyler Smith Dr. Graily Hewitt	Daily ex. S 9	4 4	..	6 6	Dr. J. Hall Davis	M W F 10	3 3	..	5 5	Dr. R. Barnes	..	..	..	..
PRACTICAL CHEMISTRY ..	Dr. Matthiessen	S 9.30—1	3 3	..	..	Mr. Taylor Mr. Heisch	M W F 11.30	3 3	..	..	Dr. Bernays	..	..	..	..
COMPARATIVE ANATOMY	Mr. S. G. Mivart	W F 10	2 2	..	3 3	Dr. T. S. Cobbold	W F 4	2 2	..	3 3	Mr. Ord	..	..	..	..
OPHTHALMIC SURGERY ..	Mr. Ernest Hart	Tu 2	2 2	..	..	Mr. Soelberg Wells	..	..	..	.	..	..	..	..	..
PRACTICAL HISTOLOGY ..	..	..	..	..	..	Dr. Woodham Webb	Tu Th 3	10 10	..	..	Mr. Rainey	S 12	..	..	..
OPERATIVE SURGERY ..	Mr. J. Lane	..	..	..	..	Mr. Nunn	S Winter	..	..	..	..	..	..	..	..
DENTAL SURGERY	Mr. Sercombe	..	..	..	..	..	..	..	..	..	Mr. Elliott	Tu F 11	..	..	..
NATURAL PHILOSOPHY ..	Mr. G. R. Smalley	F 2.45	2 2	..	3 3	..	..	..	.	..	..	..	..	..	..
GENERAL PATHOLOGY ..	..	..	..	..	..	..	..	..	..	..	Mr. Simon	..	..	..	..
AURAL SURGERY	Mr. Toynbee	Th 2.30	2 2	..	..	..	..	..	..	..	..	..	..	..	..
PUBLIC HEALTH	..	..	..	..	..	Dr. Greenhow	M 4	3 3	..	3 3	..	..	..	..	..
PRACTICAL PHARMACY ..	..	..	3 3 3 mths	6 6 6 mths	10 10 12 mths	..		5 5 6 mths	8 8 12 mths	..	..	..	..	..	..
FEES for the Lectures and Hospital Practice, for the Licences of the Royal College of Physicians, Society of Apothecaries, and the Royal College of Surgeons	..	..	..	..	89 5	..	..	..	.	88 4	..	..	..	..	..
To the Lectures alone	..	..	..	..	52 10	..	..	..	..	53 4	..	..	..	..	..
Unlimited	..	..	..	..	£105	..	..	..	.	..	..	..	..	..	90 0

LECTURES.	UNIVERSITY COLLEGE AND HOSPITAL.					WESTMINSTER.				
	Lecturers.	Days and Hours.	Fees.			Lecturers.	Days and Hours.	Fees.		
			1 Course	2 Courses	Per-petual.			1 Course	2 Courses	Per-petual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.	£ s.
MEDICINE	Dr. Jenner	Day. ex. S 4	6 10	..	8 0	Dr. Basham	M Tu Th F 4	5 5	..	7 7
SURGERY	Mr. Erichsen	Tu Th F 5	4 10	..	6 0	Mr. Holthouse	M W F 5	5 5	..	7 7
DESCRIPTIVE ANATOMY	Mr. Ellis	Daily 9	7 7	..	10 10	Mr. Heath	Tu W Th F 9.15	5 5	..	7 7
DEMONSTRATIONS	Mr. Ellis Mr. Hill	Daily	4 4	..	..	Mr. Teevan	Daily	2 2	..	3 3
PHYSIOLOGY AND GENERAL ANATOMY	Dr. Sharpey	Daily ex. S 10	6 0	..	9 0	Mr. Power	M W F 3	5 5	..	7 7
CHEMISTRY	Dr. Williamson	Daily ex. S 11	6 0	..	9 0	Dr. Dupré	Tu Th 3 F 10.30	5 5	..	7 7
HOSPITAL PRACTICE—										
Physicians	Dr. Jenner Dr. Hare Dr. Reynolds Dr. Murphy, *obs.*	Daily 1 Three times a week	.. For 6 months to the Physicians' and Surgeons' practice, £15 15s. To either separately, £10 10s.	.. For 1 year to the Physicians' and Surgeons' practice, £21. To either separately, £15 15s.	..	Dr. Basham Dr. Fincham Dr. Radcliffe Dr. F. Bird, *obs.*	M Th 1.30 W S 1 30 Tu F 1.30 Tu F 3	8 8 6 months	12 12 1 year	21 0
Assistant-Physicians	Dr. Harley Dr. W. Fox Mr. S. Ringer, M.B.	..				Dr. Anstie Dr. Gibb Dr. Willis	M Th 1 Tu F 1 W S 1	8 8 6 months	12 12 1 year	21 0
Surgeons	Mr. Quain Mr. Erichsen Mr. Marshall Mr. H. Thompson Mr. W. Jones, *oph.* Mr. Streatfeild, *oph.*	Daily 2 M W F 1				Mr. Holt Mr. Brooke Mr. Holthouse	M Th 1.30 Tu F 1.30 W S 1.30			
Assistant-Surgeons	Vacant Dr. Hillier, Medical Officer to the Skin Infirmary	.. Once a week			26 5 or 36 15	Mr. Hillman Mr. Power Mr. Heath	M Th 1 W S 1 Tu F 1	..	..	..
CLINICAL MEDICINE	Dr. Jenner Dr. Hare Dr. Reynolds	Once a fortnight Twice a week 1—3			..	By the Physicians	Weekly	..	..	..
CLINICAL SURGERY	Mr. Quain Mr. Erichsen Mr. W. Jones, *oph.*	Twice a week Once a week Once a fortnight			..	By the Surgeons	Weekly	..	..	..
MORBID ANATOMY	Dr. W. Fox	Tu W F 9 summer	3 0	..	4 0	Dr. Anstie Mr. Power	..	..	..	..
SUMMER SESSION.										
MATERIA MEDICA	Mr. S. Ringer, M.B.	Daily except M 8	4 0	..	6 0	Dr. C. B. Radcliffe	M Th F 3	3 3	..	4 4
BOTANY	Mr. Oliver	Daily except S 4	3 0	..	4 0	Mr. Syme	M W F 11.30	3 3	..	4 4
FORENSIC MEDICINE	Dr. Harley	M Tu Th F 10	3 0	..	4 4	Dr. Fincham Dr. Anstie	M W F 3	3 3	..	4 4
MIDWIFERY	Dr. Murphy	Daily except S 12	6 0	..	6 0	Dr. Bird	Tu Th S 4	4 4	..	5 5
PRACTICAL CHEMISTRY	Dr. Williamson	Daily except S 11	4 0	..	..	Dr. Dupré	Tu Th 9.30 to 12	2 2	..	..
COMPARATIVE ANATOMY	Dr. Grant, *with Zoology*	Daily except S 3 win.	8 0	..	9 0	Mr. Power	Tu F 9	2 2	..	..
OPERATIVE SURGERY	Mr. Marshall in April or May	Daily 7.30 a.m 6 p.m.	5 5	..	7 7	..	..	..	..	..
DENTAL SURGERY	Mr. Ibbetson in January	Tu Th 6	1 1	..	..	..	..	..	..	..
NATURAL PHILOSOPHY	Prof. Potter	M W F 3	4 0	..	..	Mr. Brooke	M 4 sum.	1 1	..	..
OPHTHALMIC SURGERY	Mr. W. Jones	Tu Th	2 0	..	..	..	..	..	..	..
PALÆO-ZOOLOGY	Dr. Grant	Daily except S 3 sum.	1 0	..	..	..	..	..	..	..
HISTOLOGY AND PRACTICAL PHYSIOLOGY	Dr. Harley	M W 4	3 0	..	..	..	..	..	..	..
PRACTICAL PHARMACY	..	..	3 3 3 months	..	5 5 6 months	..	..	..	..	..
Fees for the Lectures and Hospital Practice for the Licences of the Royal College of Physicians, Society of Apothecaries., and M.R.C.S.	..	..	..	..	94 13	..	..	..	..	78 15
For the Lectures alone	..	..	..	..	67 13	..	..	..	..	49 7

ADDITIONAL INFORMATION RESPECTING THE METROPOLITAN SCHOOLS.

ST. BARTHOLOMEW'S.

Collegiate Establishment.—Under the direction of the Treasurer and a Committee of the Governors of the Hospital, Students may reside in the College, superintended by the Resident Warden, Dr. Andrew, Fellow of Wadham College, Oxford, from whom the Rules may be obtained.

Scholarships.—In April, 1864: One of the value of £50, and one of £25; subjects of Examination, Medicine, Surgery, and Midwifery. One of the value of £50, and one of £25; subjects of Examination, Anatomy, Physiology, and Botany. In July. 1864: One of the value of £50, one of £30, and one of £20; subjects of Examination, Anatomy, Physiology, Chemistry, Botany, and Materia Medica.

Foundation and other Prizes.—The Treasurer's Prize will be awarded to the Student of the first year who shall make the best dissection and pass the best practical examination in Anatomy. The Foster Prize will be given to the Student of the second year who shall display the greatest industry and skill in the Dissecting-rooms. The Bentley Prize will, in 1864. be given for the best Report of Medical Cases observed in the Hospital during the previous year. The Hichen's Prize will be given to the Student who passes the best examination in Bishop Butler's "Analogy of Natural and Revealed Religion." The Wix Prize will be awarded for the best Essay on "The Connexion between Revealed Religion and Physical Science.

THE CHARING-CROSS HOSPITAL.

Matriculated Students, or those who enter for their entire Medical Education at the Charing-cross Hospital College, have the privilege of attending, without additional fee, the Course of Practical Microscopical Demonstrations on Healthy and Diseased Structures, given by Dr. Salter in the Summer; the Lectures upon the Diseases of the Eye, delivered by Mr. Hancock, at the Royal Westminster Ophthalmic Hospital, as well as the practice of that Institution. Students who enter to Charing Cross Hospital College from other Medical Schools, for the remainder of their Education, are allowed to Matriculate.

Free Scholarships.—Candidates are required to be the sons of Professional men, of reduced circumstances and position, or of gentlemen in a corresponding station of society, and are to have had a classical education fitting them for the Medical Profession. They are to send in their application and testimonials before August 1. A Printed Form for that purpose will be supplied to them on the written application of the Candidates themselves, addressed to the Managers of the College, which application must be accompanied by the official certificate of the Candidates having passed the preliminary classical examination either of the London University, of the College of Physicians, the College of Surgeons, or of the Society of Apothecaries.

Medals and Testimonials of Honour are awarded in conformity with the following arrangement:—Competitors for the Governors' Clinical Medals are to have attended the Medical and Surgical Practice of the Hospital for the full period required to qualify for examination by the College of Surgeons and Society of Apothecaries. Competitors for the Silver Class Medals, and Testimonials of Honour of the Senior Classes are to be in the last Session of their attendance in the Classes for the Medal or Testimonials for which they are competitors. Competitors for the Bronze Medals and Testimonials of Honour of the Junior Classes are to have completed, when the Current Session shall be ended, the first Session of attendance, in the classes for the Medal or Testimonial for which they are competitors. In those classes, of which only one Session is required by the College of Surgeons and Society of Apothecaries, a Silver Medal is offered for competition instead of a Bronze Medal. Gentlemen having already competed successfully in one branch of study, are not entitled again to compete in that branch.

ST. GEORGE'S HOSPITAL.

Exhibitions and Prizes.—"The William Brown Exhibition," of £40 per annum, tenable for three years: This Exhibition is competed for by perpetual pupils who have commenced their third, but not completed their fourth, Winter Session. It will be "bestowed on the Candidate who shall show the best general fitness for the exercise of the Medical Profession, and whose moral conduct shall in all respects be satisfactory." Sir Charles Clarke's Prize for Good Conduct: The interest of £200 Consols to be awarded annually to the Student of the Hospital "who, by reason of his general good conduct during the preceding year, should be considered the most deserving." The Thompson Medal: A Silver Medal to be awarded annually for the best Clinical Report of Medical and Surgical Cases observed in the Hospital during the preceding twelve months. Sir Benjamin Brodie's Clinical Prize in Surgery will be awarded to the Perpetual Pupil of the Hospital who shall have delivered to the Surgeons the best Report of not more than twenty Surgical cases which have occurred in the Hospital during the preceding twelve months. The Lewis Powell Clinical Prize in Medicine will be awarded to the Perpetual Pupil of the Hospital who shall produce the best Report of not more than twenty Medical cases which have occurred in the Hospital during the preceding twelve months. The Henry Charles Johnson Memorial Prize in Anatomy will be awarded to that Pupil who shall, in the judgment of the Medical School Committee, exhibit the greatest proficiency in Practical Anatomy. General Proficiency Prizes: To Pupils in their first year, £10 10s.; to Pupils in their second year, £10 10s.; to Pupils in their third year, £10 10s.

House-Surgeons.—The appointment is made half-yearly, on the nomination of the Medical School Committee, from among the Surgeons' Perpetual Pupils. The Pupil selected for this appointment assists the Curator for six months, and acts as Assistant-House-Surgeon for a second period of six months, before his admission to the office of House-Surgeon, which he is entitled to hold for twelve months on payment of £50 to the Treasurers of the Hospital for board and residence.

Clinical Assistants.—Every Pupil entering to the Medical Practice must hold the office of Clinical Assistant to one of the Physicians for a period of at least three months. Every Pupil entering to the Surgical Practice must hold the office of Clinical Assistant to one of the Surgeons for a similar period.

Dressers.—Every Pupil entering to the Surgical Practice must hold the office of Dresser for a period of three months; but Perpetual Pupils have the privilege of holding the office for a second period of three months. The Dresser of the Surgeon of the week boards at the Hospital free of expense.

Curator.—A Curator of the Pathological Museum is appointed annually by the Weekly Board from among the Senior Pupils, on the recommendation of the Medical School Council, with a salary of £50 per annum.

Registrars.—A Medical and a Surgical Registrar are appointed annually by the Weekly Board from among the Senior Pupils, on the recommendation of the Medical School Council, each with a salary of £20 per annum.

GUY'S HOSPITAL.

Voluntary Examinations are held at four periods of the Student's Course, as follows:—1st.—At Entrance; and will take place this year on Monday, October 12th. It will comprise Elementary Classics, Ancient and Modern History, and Mathematics. The Candidate who shall distinguish himself the most will receive £25; the second Candidate £20; and the third £15. 2nd.—At the end of July in the first year, on all the Subjects of the first year's Course of Study, one sum of £30, another of £25, and a third of £10 10s., (presented by one of the Governors,) will be given according to proficiency. 3rd. At the end of July in the second year, on the Subjects which form the Course of Study up to that time, £35 and £30. 4th. At the end of July in the third year, on all the Subjects of the Curriculum, £40 and £35.

Special Examination.—Two Gold Medals are given annually by the Treasurer to Students at the end of their third year: one for Clinical Medicine, and the other for Clinical Surgery.

The offices of House-Surgeon, Clinical Clerk, Dresser, etc., are filled by Pupils who are appointed by the Treasurer on the recommendation of the Medical Examining Council.

KING'S COLLEGE.

Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from Matriculated Students who are Pupils of the Hospital.

Scholarships.—Warneford Scholarships: The sum of £200 is set apart annually for Scholarships in the Medical Department, viz.:—"For the encouragement of the previous education of Medical Students," two Scholarships of £25 per annum, for three years; "For the encouragement of resident Medical Students," one Scholarship of £25 per annum for two years. College Scholarships: The following are given every year to Matriculated Students of this department:—1. One of £40 for two years, open to Students of the third and fourth year; 2. One of £30 for one year, open to Students of the second year; 3. Three of £20 for one year, open to Students of the first year. Daniell Scholarship: £20 tenable for two years is open to every Student of the College who has worked in the laboratory for at least six months. Divinity Scholarship, £30, open to Matriculated Medical Students.

Prizes.—Leathes' Prizes: Bible and Prayer-book to two Matriculated Medical Students. Warneford Prizes: £40 is expended in the purchase of Medals and Books, as Prizes to two Matriculated Medical Students. Class Prizes are awarded annually for proficiency; these consist of Books of the value of £3. Two Medical Clinical Prizes, one of £3 for the Winter Session, and the other of £2 for the Summer Session; and two Surgical Clinical Prizes of the same value are given for attendance at the Hospital. Todd Medical Clinical Prize: This prize was founded in memory of the late Dr. Todd. It consists of a Bronze Medal and Books to the value of £4 4s.

Residence of Students.—A limited number may reside within the College.

THE LONDON HOSPITAL.

Prizes and Appointments.—Two Gold Medals are annually awarded to Students who shall have most distinguished themselves in the performance of their duties at the Hospital. A Resident Medical Officer, who resides and boards in the Hospital, and receives £75, is appointed for twelve months by the Committee of the Hospital. The Resident Medical Officer is eligible for re-election for the further period of twelve months, and then receives £100. A Medical and Surgical Registrar is appointed by the Committee of the Hospital, and receives £25 a-year. Two House-Surgeons, a Resident Accoucheur, an Assistant Medical Officer, two Surgical Dressing Pupils, four additional Dressers (for out-patients), an Assistant Dentist, and Post-mortem Clerks are selected from among the Students according to merit.

ST. MARY'S HOSPITAL.

Resident and Non-Resident Medical Officers, Clinical Clerks and Dressers.—All these Appointments are open to the Pupils without additional Fee, and are held in succession, so as to secure a complete system of Clinical training. Five of these Appointments exceed in value an equal number of Scholarships of £50 each.

Prizes.—Examination for Prizes are held at the termination of each Session, the Classes being grouped in accordance with the curriculum laid down for Students of the First, Second, and Third Year. The average value of each of these Prizes is £5 5s. Prizes in the Classes of Comparative Anatomy and Natural Philosophy are also given. Certificates of Honour are presented to those Students who show superior proficiency in the above Classes. A Scholarship in Anatomy, of the annual value of £25 (the holder of which will be styled Assistant-Demonstrator, and assist in the teaching of Practical Anatomy) will be awarded to the best qualified Student. A Prize of £20 for Students of the First Year is awarded at the end of the Winter Session. A Prize of the value of £4 4s. will be given to the Student who shall make the best Anatomical Preparation, such Preparation to become the property of the School. Two Prosectors are appointed annually, who each receive a Certificate and £5 for their services in the Dissecting-room.

THE MIDDLESEX HOSPITAL.

Clinical Clerks and Dressers.—General Students have the privilege of performing the duties of Clinical Clerks and Dressers, according to arrangements which the Clinical Directors may from time to time consider expedient.

Resident Medical Appointments.—Six Resident Appointments, viz., three Resident Medical Assistantships, one Obstetric Assistantship, and two House Surgeoncies, are annually given to Students who have complied with the established Regulations. The selection is made after competitive examination of the Candidates. The officers thus appointed reside and board in the Hospital free of expense. The House-Surgeons pay a fee of £21.

Prizes.—To those Students who have most distinguished themselves in all the subjects of study the following Prizes will be awarded:—First Winter Session.—A Prize of the value of £6 6s.; a Prize of the value of £4 4s. First Summer Session.—A Prize of the value of £3 3s.; a Prize of the value of £2 2s. Second Winter Session.—A Prize of the value of £6 6s.; a Prize of the value of £4 4s. Second Summer Session.—A Prize of the value of £3 3s.; a Prize of the value of £2 2s. Clayton Prize.—An Annual Prize of the value of £3 3s., given by Oscar Clayton, Esq., is awarded for proficiency in Comparative Anatomy. Third Winter Session.—A Prize of the value of £6 6s.; a Prize of the value of £4 4s. For Reports in Clinical Medicine a Prize of the value of £6 6s.; a Prize of the value of £4 4s. for Reports in Clinical Surgery. The Governors' Prize of £21 will be awarded to the Student who, having distinguished himself generally by conduct and acquirements in the School, shall present the best joint Clinical Reports in Medicine and Surgery.

ST. THOMAS'S HOSPITAL.

Prizes and Appointments.—To the three most distinguished Pupils for general proficiency in each year the following prizes are awarded:—First Year's Students:—1st. The Wm. Tite Scholarship (the interest of £1000 Consols, tenable for three years); 2nd. A College Prize of £20; 3rd. Ditto of £10. Second Year's Students:—1st. A College Prize of £30; 2nd. Ditto of £20; 3rd. Ditto of £10. Clinical Clerks and Dressers are selected according to merit from among the students of this period, and those who distinguish themselves by the accuracy of their reports and diligence will receive Certificates of Honour. The Dressers are provided with Rooms and Commons during their period of attendance in the Hospital free of expense. Third Year's Students:—1st. A College Prize of £30; 2nd. Ditto of £20; 3rd. Ditto of £10. Fourth Year's Students:—1st. For Practical Medicine and Pathology, a College Prize of £20; 2nd. For Practical Surgery and Pathology, a College Prize of £20. The Cheselden Medal, founded by George Vaughan, Esq., is awarded in respect of a Special Examination in Surgery and Surgical Anatomy. The Treasurer's Gold Medal is given annually for general Proficiency and Good Conduct. The Grainger Testimonial Prize, of the value of £20, will be awarded biennially to Third or Fourth Years' Students, for the best Physiological Essay. The Smith Prize of £5 for the best Essay on "Neuralgia."

The House Surgeons and Resident Accoucheur are chosen according to merit from Gentlemen who have obtained their Professional Diplomas; the former to hold office for six or twelve months, the latter for three or six. All are provided with Rooms and Commons. The two offices of Medical Registrar and Surgical Registrar are from time to time filled from among Gentlemen who have completed their studies in the School. Each Registrar, on completing his Annual Report to the satisfaction of the Physicians and Surgeons, receives a gratuity of £40. If the two offices are held by one person, he then receives, on completing his reports as above, a gratuity of £80.

UNIVERSITY COLLEGE, LONDON.

Scholarships and Exhibitions.—Atkinson Morley Surgical Scholarships: An Annual Scholarship, £45, awarded to the Student who, upon examination, shall be found to possess the greatest proficiency in the Theory and Practice of Surgery, tenable for three years. Longridge Exhibition: In every Session a Prize of £40 is awarded for General Proficiency in Medicine and Surgery. Filliter Exhibition: A Prize of £30, awarded annually, founded "For the encouragement of proficiency in Pathological Anatomy."

Medals and Prizes.—Dr. Fellowes's Clinical Medals, one Gold and one Silver, awarded at the end of each term to Pupils who shall have most distinguished themselves by reports and observations on the Medical cases in the Hospital. The Liston Gold Medal will be awarded at the end of the Session to the Pupils who shall have most distinguished themselves by reports and observations on the Surgical cases in the Hospital.

Class Medals and Prizes.—Besides the above, examinations are held in each Class, and at the end of every Session Gold and Silver Medals to those Students who most distinguish themselves in each particular branch of study.

Offices in the Hospital tenable by Students.—Physicians' Assistants, House-Surgeons, Midwifery Assistants, Physicians' Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants are selected from the Pupils, without additional fees. The Physicians' Assistants, Obstetric Assistant, and House-Surgeons reside in the Hospital, paying for their board.

WESTMINSTER HOSPITAL.

Prize Appointments and Prizes.—The offices of House-Physician and House-Surgeon are open to competition amongst Gentlemen who have been educated at the Hospital, and who are qualified to practise under the Medical Registration Act. Assistant House-Surgeon: Is appointed without fee from among the Senior Students by Examination. Clinical Clerks and Dressers: These appointments are conferred without fee, in rotation, upon the most diligent students.

Prizes.—A Prize of Books or Instruments for each of the Winter and Summer Courses. A Prize of the value of 5 guineas, to be competed for by all Students who have not presented themselves for their final examinations before any of the Examining Boards, the subject being Clinical Medicine. A Prize of similar value, and under similar conditions for Clinical Surgery. A special Prize will be given for Clinical Midwifery by the Westminster Maternity Charity. Chadwick Prize for General Proficiency. A sum of 20 guineas will be awarded, in one or more Prizes, to the most meritorious Student or Students who are attending Lectures and Hospital Practice for the second or third year.

ENGLISH PROVINCIAL SCHOOLS AND HOSPITALS.

BRISTOL MEDICAL SCHOOL, SESSION 1863-64.

The Winter Session will commence on Thursday, October 1, 1863. Medicine, Dr. Brittan. Surgery, Mr. Prichard. General Anatomy and Physiology, Drs. Martyn and Fripp. Descriptive and Surgical Anatomy, Messrs. W. Coe and Leonard. Superintendence of Dissections, Messrs. Landsdown, Winter, and Atchley. Chemistry, Mr. Herapath, sen.

The Summer Session will commence on May 2, 1864. Midwifery, Dr. Swayne. Forensic Medicine, Dr. Marshall and Mr. Herapath, sen. Materia Medica, Dr. Burder. Botany, Mr. Clark. Practical Chemistry, Mr. Herapath, sen. Fee for perpetual attendance on all the above Courses, excepting Practical Chemistry, £47 5s.

BRISTOL ROYAL INFIRMARY.

The Infirmary contains 242 beds.

Fees	For One Year.	For Two Years. (At One Payment)	For Three Years. (At One Payment.)
Surgeon's Pupil	£12 12s.	£21	£26 5s.
Dresser (Extra Fee)	£12 12s.	£21	£26 5s.

Physician's Pupil, for 6 Mths., £8; 1 Yr., £15; 18 Mths., £20; Perpetual, £25.

BRISTOL GENERAL HOSPITAL.

The Hospital contains 180 beds.

Fees	For Six Months.	One Year.	Perpetual.
Medical or Surgical Practice	£6	£10	£20

Extra Fee for Dresser or Clinical Clerk, £5 5s.—Library Fee, £1 1s. pr. an.

HULL AND EAST-RIDING SCHOOL OF MEDICINE AND ANATOMY, KINGSTON-SQUARE.—SESSION 1863-64.

The Winter Session will commence on Thursday, October 1, 1863. Anatomy, Physiology, and Pathology, Mr. Craven. Anatomy and Anatomical Demonstrations, Dr. King. Principles and Practice of Medicine, Dr. Daly. Principles and Practice of Surgery, Mr. Gibson. Chemistry, Mr. Walton. Summer Session commencing May 1, 1864.—Midwifery. Mr. H. Gibson. Materia Medica, Messrs. Arden and Holden. Forensic Medicine, Dr. Munroe, F.L.S. Botany, Mr. Niven. Perpetual to all the Lectures, except Chemistry, £42. Perpetual Fee for attendance on the Medical and Surgical Practice, £21. Clinical Lectures, £1 1s. Application for Tickets may be made to Mr. R. M. Craven, 14, Albion-street, Hull.

LEEDS SCHOOL OF MEDICINE.

The Winter Session will commence on Thursday, October 1st, 1863. Pathology, by Mr. Ikin and Mr. Wheelhouse. Anatomy, by Mr. Teale, Jun., Mr. Atkinson, and Mr. Seaton. Surgery, by Mr. Nunneley and Mr. Hey. Chemistry, by Mr. Scattergood and Mr. Reynolds. Principles and Practice of Physic, by Dr. Chadwick, Dr. Heaton, and Dr. Hardwick. Summer Session, 1864, commencing May 1st.—Materia Medica and Therapeutics, by Dr. Bishop. Midwifery, by Mr. Smith and Mr. Price. Forensic Medicine and Toxicology, by Dr. Smith. Botany, by Mr. Hall. Practical Chemistry, by Mr. Scattergood. Operative Surgery, by Mr. Nunneley and Mr. Hey. Fee to all the Courses required by the Examining Bodies, except Practical Chemistry, £42. The terms of attendance on the Practice of the Infirmary, the House of Recovery, the Dispensary, and the Eye and Ear Infirmary, may be known on application to the officers of those Institutions. Secretary, R. G. Hardwick, M.D.

LIVERPOOL NORTHERN HOSPITAL.

Physicians, Dr. Collingwood and Dr. Waters. Surgeons, Mr. Chalmers, Mr. Hakes, and Mr. Manifold. Junior Surgeon, Mr. Lowndes.

Fees for Hospital Practice.—Perpetual, 30 guineas; one year, 12 guineas; six months, 9 guineas.

LIVERPOOL ROYAL INFIRMARY AND SCHOOL OF MEDICINE.

The Session of 1863-64 will commence on Wednesday, October 1.

Hospital Practice, Royal Infirmary.—Physicians: Dr. Vose, Dr. Turnbull, Dr. Inman. Surgeons: Mr. Stubbs, Mr. Long, Mr. Bickersteth. House-Surgeons: Dr. Rawdon and Mr. Nash. Dental Surgeon: Mr. Snape.

Terms for Hospital Attendance and Clinical Lectures:—

	Medical Practice.	Surgical Practice.
For Six Months	£5 5 0	£5 5 0
One Year..	9 9 0	9 9 0
The Second Year ..	6 6 0	6 6 0
The Third Year ..	5 5 0	5 5 0
Perpetual	18 7 6	18 7 6

Lectures, Winter Session.—Surgery, Messrs. Long and Bickersteth. Principles and Practice of Medicine, Dr. Cameron. Anatomy, Physiology, Pathology, Descriptive and Surgical Anatomy Mr. Fletcher, Dr. Waters, and Dr. Graham. Chemistry and Pharmacy, Dr. Edwards.

The Dissecting Room is open daily from 8 a.m. to 6 p.m., under the superintendence of the Anatomical Lecturers and the Demonstrator of Anatomy.

Lectures, Summer Session.—Midwifery, Mr. Batty. Diseases of Children, Mr. Grimsdale. Materia Medica and Therapeutics, Dr. Nevins. Medical Jurisprudence, Drs. Whittle and Edwards. Botany, Dr. Collingwood. Ophthalmic Medicine and Surgery, Dr. Taylor. Practical Chemistry, Dr. Edwards. Pathological Anatomy, Dr. Gee. Dental Surgery, Mr. Snape. Dental Anatomy and Physiology, Comparative and Human, Mr. Fletcher and Dr. Waters. Metallurgy, Dr. Edwards.

The Fee for all the Lectures required by the Colleges of Surgeons and Physicians and the Apothecaries' Hall is £45, payable in advance. Registrar, Mr. Fletcher, 13, Mornington-terrace.

THE MANCHESTER ROYAL SCHOOL OF MEDICINE AND SURGERY, FAULKNER-STREET.

The Winter Session will commence on Thursday, October 1, at 12 o'clock.

Winter Session, 1863-64.—Physiology, by Mr. Turner and Mr. Smith. Descriptive Anatomy, by Mr. Lund and Mr. Heath. Practical Anatomy, by Mr. Leech. Chemistry, by Mr. Stone. Principles and Practice of Medicine, by Dr. Roberts. Principles, Practice, and Operations of Surgery, by Mr. Southam. Anatomy, Physiology, and Pathology of the Eye, by Mr. Hunt and Mr. Lund.

Summer Session, 1864.—Midwifery and Diseases of Women and Children, by Mr. Greaves. General Pathology and Morbid Anatomy, by Dr. Morgan. Materia Medica, Medical Botany, and Therapeutics, by Mr. Somers. Forensic Medicine, by Mr. Harrison. Botany, by Mr. Grindon. Practical Chemistry, by Mr. Stone.

Perpetual Fee to the whole of the Lectures required to qualify for Examination at the London University, the Royal College of Physicians and Surgeons, and the Apothecaries' Company, £42.

COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

Winter Session, commencing October 1, 1863.—Physiology, Dr. Embleton. Anatomy, Dr. McNay. Dissections, Dr. Murray. Medicine, Dr. Charlton. Surgery, Dr. Heath. Chemistry, Dr. Richardson.

Summer Session.—Midwifery, Drs. Dawson and Gibson. Botany, Mr. Thornhill. Medical Jurisprudence, Dr. Donkin. Materia Medica, Dr. Humble. Practical Chemistry, Dr. Richardson, M.A. Operative Surgery, Dr. Heath. Military Surgery, Sir John Fife. Pathological Anatomy, Dr. Gibb.

Fees for Lectures.—Perpetual Fee for all the Lectures qualifying for the Licence in Medicine, and the Mastership in Surgery, of the University of Durham, the Licence and Membership of the Royal College of Physicians, the Diploma of the College of Surgeons, and the Licence of the Apothecaries' Society, and payable on entering to the first Winter Session, £46 4s.

Hospital Practice.—This can be attended at the Newcastle Infirmary.

Fees for Hospital Practice.—Twelve Months, £7 7s.; Six Months, £5 5s.; Three Months, £4 4s.; Perpetual Fee, £17 17s.; or, if paid by instalments, First Year, £7 7s.; Second Year, £6 6s.; Third Year, £5 5s. These fees also are payable in advance.

QUEEN'S COLLEGE, BIRMINGHAM.

Medical Department.—The Winter Session will commence on October 1. Medicine and Pathology, Professor Dr. Wade. Surgery, Professor Sands Cox, F.R.S. Anatomy, Professor Jordan. Chemistry, Professor Anderson. Physiology, Professor Dr. Lawson. Demonstrators of Anatomy, Professor Jordan and Dr. Foster. Clinical Medicine, Professors Drs. Wade and Fleming. Clinical Surgery, Professors West, Gamgee, and Jordan. Clinical Midwifery, Professor Berry. Practical Midwifery, Professor Dr. Suckling. Dental Surgery, Mr. Parker. Resident Medical Tutor, Dr. Foster. Total Fees for Lectures and Hospital Practice (three years), £69 6s., payable by instalments. For Prospectus, apply to Dr. Wade, 16, Temple-row.

SYDENHAM COLLEGE MEDICAL SCHOOL, SUMMER-LANE, BIRMINGHAM (Opposite the General Hospital).

The Session 1863-64 will commence on Friday, October 2. Anatomy and Physiology, Dr. Jordan, M.D., and Mr. Bartleet, M.B. Practical Anatomy and Demonstration, Messrs. Elkington, Jones, and Johnson. Principles and Practice of Medicine, Drs. Fletcher and Russell. Principles and Practice of Surgery, Messrs. Baker and Bolton. Surgical Pathology, Mr. Pemberton. Dental Physiology and Surgery, Mr. Howkins. Chemistry, Dr. Hill. Summer Session.—Midwifery, Dr. Elkington. Materia Medica and Therapeutics, Messrs. Bassett and Harrison. M.B. Practical Chemistry, Alfred Hill, M.D., F.C.S. Botany, Mr. Westcott. Forensic Medicine, Mr. Swain. Further particulars may be obtained on application to the Principal, Dr. Bell Fletcher, Waterloo-street.

SHEFFIELD MEDICAL INSTITUTION.

President: William Jackson, Esq., F.R.C.S.E. Session 1863-64.

Lectures.—Winter Session, commencing October 1, 1863.—Descriptive Anatomy, Mr. Skinner and Dr. Allanson. Physiology, Dr. Keeling. Practical Anatomy and Demonstrations, Messrs. H. Walker and Le Tall. Chemistry, Dr. Bingley. Medicine, Dr. Bartolomé. Surgery, Messrs. Barber and W. F. Favell. Summer Session, commencing May 1, 1864.—Midwifery, Mr. Arden. Materia Medica, Mr. Kemp. Medical Jurisprudence, Dr. Griffiths. Dental Surgery, Mr. Merryweather. Botany, Messrs. Birks and Le Tall. Practical Chemistry, Dr. Bingley. The Fee for all the Lectures required by the College of Surgeons, the College of Physicians, and the Society of Apothecaries is £42. This, however, is exclusive of the Fee for Practical Chemistry, which must be subject to special arrangement with the Lecturer. Honorary Secretary, Mr. Barber, 5, Eyre-street, Sheffield. The Terms of Attendance on the Practice of the Sheffield General Infirmary:—Eighteen Months' Medical, £15 15s.; Three Years' Surgical, £21. Attendance at the Sheffield Public Hospital and Dispensary may be known on application to the Officers of that Institution.

CHEMICAL AIDS TO THE MEDICAL PRACTITIONER.

By ROBERT DUNDAS THOMSON, F.R.S.S. L. & E., etc.

No. I.

Importance of a Knowledge of the Practical Details of Chemistry —Testing or Qualitative Analyses—Mode of Testing Reagents —Caustic Ammonia, source, impurities—Caustic Soda, source, impurities—Sulphohydric Acid Preparation—Sulphide of Ammonium Preparation—Oxalate of Ammonia Preparation, impurities.

The importance of a practical acquaintance with the details of chemistry has long been recognised by examining Medical Boards, but it is matter of question if the present methods of obtaining a knowledge of Medical chemistry in its applied relations are on a par with the requirements of the times. Indeed, there appear to be substantial arguments in favour of the view that the system of lecturing on chemical subjects as at present practised in reference to the time devoted to it, is much more extended than the attention paid by regulation to the practical study of the science. And it might be well worth the consideration of those who influence the education of the rising members of the Profession if the time be not arrived when a three months' course ought to suffice for the lectures on the science, and six months should be appropriated to the study of the practical details of chemistry. An intimate acquaintance with the wants of Medical students in reference to chemistry has long produced the conviction that much time is lost at the commencement of their education from their not being brought at a sufficiently early period in actual contact with the various forms of matter which the lecturer discusses. It is a good practice to afford facilities to students of chemistry for making themselves acquainted with the characters of acids and bases by their own experiments from the commencement of the course of lectures. This experience will tend to initiate them into a knowledge of the language of the science, which is thus placed on the same footing with anatomy as learned in the dissecting-room. Besides, if specimens of salts are subjected to examination without any indication being supplied of their composition, the inquiry will possess a character of originality which tends to interest the beginner. In carrying out this view an assistant may supply such students as desire it at cost price with the acids, tests, blowpipes, etc., necessary for the simpler kinds of qualitative analyses. The object is to ensure their possessing at least the means of a limited research; their own enthusiasm or appreciation of knowledge will undoubtedly carry them further on to deeper investigations. Specimens of salts should be given out weekly, and short descriptions required of the experiments made, and of the conclusions drawn as to the nature of the unknown substance supplied for examination. It has been gratifying to find in many instances by experience that sometimes the identical simple apparatus has been preserved for use many years afterwards by the pupils, while at other times the ambition for a well-stocked laboratory has been realised to the benefit of the pupil and his patients, and to the great satisfaction of the teacher, when he has happened to fall by chance on his former young friends after being established in practice in widely-distributed parts of the empire. One gratifying case exhibited the advantages of retaining even the original apparatus after the period of pupilage had passed. Soon after settling in practice, a pupil, who had distinguished himself by his attention to the weekly practical exercises, was summoned to a family, the members of which had been more or less attacked with vomiting, abdominal pain, and purging. Suspicion was directed to the flour used by the family, when the youthful Physician—but fortunately practised qualitative analyst—at once detected arsenious acid, and saved the lives of his patients. Other cases have occurred in which either the knowledge of the Practitioner was deficient in chemical details, or his suspicions were too tardily awakened, so that the correct testing followed the post-mortem examination instead of preceding the fatal issue of the seizure. In testing, it is best to be thoroughly master of the characters of the oxides and sulphides of the metals. This knowledge is obtained chiefly through the instrumentality of the caustic alkalies, alkaline sulphides, and sulphuretted hydrogen gas. Thus the sesquichloride of iron of the Pharmacopœia is readily recognised by the yellow sesquioxide which it affords with caustic ammonia, and caustic soda, by the black sulphide by sulphide of ammonium, and by yielding no precipitate with sulphohydric acid except a deposit of sulphur. Upon the purity of reagents all accuracy of testing depends. It is necessary therefore that the analyst should first become expert at determining the purity or impurity of his tests. Hence it may be reckoned the first step in chemistry, and the experiments to be described should be carefully repeated with all new purchases of reagents. This is indispensable in all poisoning cases, and in examining human blood, and whenever minute accuracy is indispensable.

In the foremost rank of these reagents we must place caustic ammonia (NH_3HO), the liquor ammonia of the Pharmacopœia. It is prepared on the large scale, and sold of high strength. As no testing analyses are of the slightest value unless the reagents have been previously examined and demonstrated to be pure, it will be found in all cases indispensable that one should be acquainted with all probable impurities, and the research will be undoubtedly abbreviated if we are able to recollect the sources of the foreign substances likely to be present. In all instances, therefore, the process of manufacture must supply us with the best indications of the probable impurities in our reagents. Knowledge of its mode of preparation will hence assist in detecting the impurities with which we may expect the sulphate of ammonia to be contaminated. This salt, now prepared in large quantities by saturating the ammoniacal liquor of gas works with oil of vitriol, is the most economical source of the reagent. The solution of the sulphate thus formed is evaporated either in cast iron boilers by a fire or in a leaden vessel by steam, till it possesses a density of 1·3, when it is run out into a vessel lined with lead and crystallized. Another method is to distil the ammoniacal liquor in a close boiler, and to conduct the products into a dilute solution of sulphuric acid, or acid of a density of 1·7; in this method the sulphate of ammonia precipitates, or, as the workmen call it, "drops" from the saturated solution, and is "fished" out by a copper ladle, and is called "fished salt." This process has been further improved by certain patents on the principle of Coffey's still, whereby cast iron columns thirty feet in height, and four feet in diameter, and filled with plates four inches apart, and perforated with holes to admit of passage both ways, have been to a small extent adopted. The crude gas liquor from a cistern flows in at the top, while high pressure steam enters at the bottom. The steam in its upward passage carries with it the carbonate of ammonia and sulphide of ammonium, and escapes at the top by an exit pipe into a vessel containing sulphuric acid diluted with twice its volume of water. The distillation is continued till the sulphuric acid is saturated, and it is then "fished" out, as already described in the first process, and allowed to drain till it is ready for being stored or put into casks; it then constitutes commercial sulphate of ammonia. It not unfrequently happens that some makers mix it with sulphate of soda or chloride of sodium. The sulphate of ammonia, prepared by any of these methods, is then heated in a retort with slaked lime; the gaseous ammonia passes over, and is condensed in water under pressure. From the nature of the manufacture we can readily discern that the volatile portions of the ammoniacal liquor of coal-gas might be present in caustic ammonia. Hence, when we treat a quantity of it with chlorohydric acid, it sometimes assumes a crimson hue from the action of the acid on one of the pyrogenous oils (*pyrol*) produced during the distillation of coal. Sometimes a portion of the sulphate of ammonia is carried over mechanically during the action of heat on the lime and salt in the retort. This impurity is detected by the discovery of sulphuric acid. To test for sulphuric acid in caustic ammonia, it is necessary to dilute the latter with pure distilled water, which must be previously proved to contain no sulphuric acid. The dilute caustic ammonia is then to have pure nitric acid added to it until the liquor reddens litmus solution or litmus paper. If, on the addition of nitrate of baryta to the acid liquid, a white powder falls, we may infer the presence in the caustic ammonia of sulphate of ammonia. (NH_4O,SO_3, and $BaONO_5 = NH_4ONO_5$, and $BaOSO_3$.) We often find chlorine in caustic ammonia, which may proceed either from sal-ammoniac being sublimed or carried over from the retort when that salt is employed as the source of the reagent instead of sulphate of ammonia. Chlorine is to be detected by supersaturating the caustic ammonia diluted with water by means of pure nitric acid, so that litmus paper will be reddened, and then adding a few drops of solution of nitrate of silver, when, if no chlorine be present, the acid liquid will remain clear, but if that substance be in the solution, a precipitate varying from an opalescence to a curdy deposit will be exhibited, according to the amount of the chlorine. Should the caustic ammonia be prepared by the decomposition of carbonate of ammonia and lime, carbonate of ammonia may exist in the distillate. The presence of the carbonic acid will easily be rendered apparent by simply pouring in a few drops of a solution of nitrate of baryta into the caustic ammonia, when carbonate of baryta will be produced (NH_4OCO_2, and $BaONO_5 = NH_4ONO_5$, and $BaOCO_2$).

A request was made on one occasion to name a manufacturer for the supply of a quantity of caustic ammonia, and having mentioned one who was conspicuous in the trade, a sample was sent to be tested; when, on being diluted and tested with oxalic acid, it yielded a copious precipitate—a white powder quite soluble in nitric acid, and affording carbonate of lime when ignited on the lid of a platinum crucible. The ammonia likewise contained much chlorine, which was obviously united with the lime as chloride of calcium. The presence of this salt proved the nature of the process by which the caustic ammonia was manufactured.

Chloride of ammonium, or sal-ammoniac, was obviously the source of the ammonia, and when distilled with lime, ammoniacal gas and chloride of calcium would be the results. The explanation of the cause of the impurity was at once obvious; some of the chloride of calcium had been carried over mechanically along with the distillate. The presence of copper or tin, derived sometimes from the apparatus, may be detected by passing sulphohydric acid gas through the caustic ammonia until it is saturated. The appearance of a brown or black precipitate would indicate either one or both of these metals. Another test for caustic ammonia is its low density.

The liquor ammoniæ of the Pharmacopœia has a specific gravity of ·960, and contains between 9 and 10 (9·5) per cent. of ammonia; the ammoniæ liquor fortis has a density of ·882, and contains upwards of 29 per cent. of ammonia.

To determine the density of caustic ammonia a hydrometer, used for measuring densities inferior to water, must be employed, such as are in use for experiments on spirits and wines. If caustic ammonia consist, as it ought to do, of ammoniacal gas dissolved in distilled water, a few drops of it, when evaporated in a water glass, should leave no residue, but should be entirely expelled. The evaporation of a few drachms would speedily detect the presence of common salt or chloride of calcium, which would not be driven away even by a red heat.

Caustic soda ($NaOHO$) or *caustic potash* ($KOHO$) dissolved in water are most valuable agents in the discrimination of the metallic oxides. But they must be prepared of great purity, otherwise conclusions may be drawn of an injurious tendency. The process for preparing these agents is to use the carbonate of either of the alkalies, and remove the carbonic acid by means of lime, with which it forms an insoluble compound. The purest caustic alkali will of course be formed from the least impure salt. The sesquicarbonate of soda and bicarbonate of potash are the purest forms in which these alkalies are usually known, and would afford a solution of the caustic alkali containing the least amount of foreign matter. But caustic soda and potash are made upon the large scale, and are vended often with much impurity dissolved, and it is therefore essential that these sophistications should be known. When made in quantity, they are usually prepared from alkaline ash (soda ash and pearl ash), an impure mixture of carbonate and caustic alkali. They will therefore contain aluminite of soda and silicate of soda, alkaline sulphate and chloride, sulphite, hyposulphite and sulphide.

Analysis Afforded in One Sample of Soda Ash.

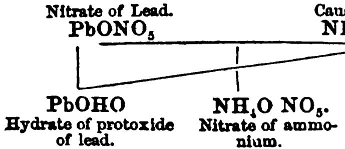
Carbonate of soda	71·614
Hydrate of soda	11·231
Sulphate of soda	10·202
Sulphite of soda	1·117
Hyposulphite of soda	trace.
Sulphide of sodium	trace.
Chloride of sodium	3·051
Aluminite of soda	·923
Silicate of soda	1·042
Insoluble matter and sand	·316
	99·496

The sulphuric acid may be detected by supersaturating the diluted liquor with pure nitric acid, and adding nitrate of baryta, when sulphate of baryta will fall as a white powder, quite insoluble in nitric acid. Chlorine may be likewise tested for by the use of nitric acid and nitrate of silver. Hyposulphurous acid may be obtained by neutralisation with sulphuric acid, when sulphur will be deposited, and the smell of burning sulphur will be evolved by the discharge of sulphurous acid; hyposulphurous, which consists of sulphur and sulphurous acid, being destroyed on the removal of the base by the acid added (NaO,SO_2S and $SO_3 = NaOSO_3$ and S and SO_2). The addition of a few drops of solution of sulphate of copper to caustic soda or potash will yield a black precipitation if sulphur should be present in the form of sulphide of sodium. So constant is its presence in the large manufacture of this article, that the maker usually throws down the sulphur in this way, but frequently adding an excess gives a bluish tinge to the fluid. This is peculiarly observable when the liquid is evaporated into a solid mass. The caustic alkali obtained is possessed of a blue colour, due to the excess of copper. The samples of solid caustic soda exhibited in the chemical department of the International Exhibition were characterised by the presence of large quantities sometimes of sulphate of copper, sometimes brownish when sesquioxide of iron is present, so that the article might have readily been mistaken for a preparation of copper. About eighteen years' ago, when engaged in a series of analyses of the food of cattle, in an inquiry for Government, the ashes of plants all seemed to contain a trace of alumina, but the amount being almost a constant quantity throughout, the alumina appeared to be derived from another source. Upon examination it was found to exist in the caustic soda employed, although it was most carefully prepared by boiling crystallized carbonate of soda with slaked lime and water, the water being always at least ten times the weight of the soda used. The lime employed was obtained from the hard chalk formation, and in all likelihood supplied the alumina, as it was greater in amount than could have been derived from the carbonate of soda, in which it would not be appreciably detected. To detect alumina in caustic potash or soda, it may be noticed that the alumina is united with the alkali as an acid or aluminite. To discover it the alumina must be replaced by a stronger acid; the best is pure nitric acid, which should be added until the liquid reddens litmus paper. On the addition of caustic ammonia to the acid liquor, white flocks will speedily subside if alumina be present. Of a very large number of samples which it has been our lot to test, we do not recollect of one, whether the alkali was potash or soda, in which alumina or silica were not present. To render caustic potash or soda still more pure, it is usual to evaporate the liquid to dryness, and to boil the residue with alcohol, which will dissolve the caustic alkali and leave the alkaline salts. Samples of solid potash which were sold as being prepared by means of alcohol, have been found to yield alumina or silica; so that it would be impossible to use such a reagent for the detection of minute quantities of alumina without previously determining the amount present in the reagent, and deducting it from the alumina obtained in the analysis. Silica, which is also present in soda ash and in lime, very much resembles alumina when precipitated by an acid in combination with water as a hydrate.

Sulphohydric acid (SH) is easily prepared by causing dilute sulphuric acid to act on sulphide of iron in a flask, supplied with an educt tube to convey the gas through the solution to be tested. This operation ought to be performed in a small chamber or box, supplied with a glass door, through which the experiment can be watched, an opening at the upper part of the compartment serving to convey the noxious gas into the chimney; an intermediate washing bottle should be placed between the flask and the solution, so as to remove any acid or other impurity which might be carried over mechanically.

Sulphide of Ammonium (NH_4S) is a yellow solution, smelling strongly of sulphohydric acid. It is prepared by passing a stream of sulphohydric acid through caustic ammonia until the ammonia is saturated. We judge whether the impregnation has been carried sufficiently far by testing with a strong solution of Epsom salt, or sulphate of magnesia. This salt produces in caustic ammonia a partial precipitation of magnesia, but when the ammonia has been saturated with sulphur it no longer precipitates sulphate of magnesia. When this point is attained the sulphide of ammonium may be considered ready for use. This experiment must be performed in the close box or compartment already described, and it is advisable to retain this reagent permanently in this apartment, as its fumes are apt to escape by the sides of the stopper, or may act as a nuisance by its smell, and blacken paint or colouring matters containing iron, copper, and some other metals.

By means of the reagents now described a large number of oxides and sulphides of the metals may be isolated and studied, especially from the pure salts, and as the alkalies act simply by removing the acid from the base, and allowing the oxide to drop, there is no complexity in the reaction. Since the interchange of acids and bases is of the simplest nature, the chemical change may be illustrated by the following diagram, in which the first line represents the nitrate of protoxide of lead mixed with caustic ammonia. In the second line the products of the action are exhibited:—



$$\underset{\text{Nitrate of Lead.}}{PbONO_5} \qquad \underset{\text{Caustic Ammonia.}}{NH_4O + HO}$$

$$\underset{\text{Hydrate of protoxide of lead.}}{PbOHO} \qquad \underset{\text{Nitrate of ammonium.}}{NH_4O\ NO_5.}$$

The caustic ammonia, which may be represented either as ammoniacal gas with water (NH_3HO), or as oxide of ammonium with water (NH_4O,HO), unites with the nitric acid, forming nitrate of ammonia, while the protoxide of lead falls in union with water as the hydrate of protoxide of lead; the anhydrous protoxide being, as is well known, litharge.

As a preparation for quantitative analysis it will be found a useful exercise to arrange the oxides according to their reactions with caustic ammonia and caustic potash or soda, and then to study their relations to sulphohydric acid and sulphide of ammonium, by which means the characters of the sulphides are ascertained. The peculiar or distinguishing tests are such as are required to discriminate between two oxides whose characters closely approximate, and these require to be carefully tested. No doubt they may be bought of very considerable purity, but experience proves that the best pharmaceutical dealers are liable to mistakes, and that particularly where evidence is required in a court, or where the honesty of a tradesman in the sale of food is concerned, it is essential that the analyst should have subjected every one of his tests to a careful scrutiny. By means of the *oxalate of ammonia* we can detect lime; but in preparing it we must recollect that the oxalic acid of commerce often contains binoxalate of potash and oxalate of lime. It is necessary therefore to dissolve it in water and filter the solution. The cold filtered solution of oxalic acid is now to be saturated with carbonate of ammonia, which is to be judged of by the solution restoring the original blue colour of litmus paper to what has been rendered red-tinted by an acid. It is proper to use cold water, because an effervescence is produced when hot water is poured on carbonate of ammonia, due to the volatility of the salt. The solution of oxalate of ammonia is then evaporated to a concentrated state, and allowed to crystallise spontaneously. By means of this test we are able to discriminate lime from baryta, since both oxalic acid and oxalate of ammonia produce in dilute solutions of lime a speedy precipitation. Oxalic acid in even tolerably strong solutions of baryta affords no precipitate; but on the addition of ammonia a precipitate falls. If, however, the solution be very dilute no precipitation occurs.

Cold Affusion in Narcotic Poisoning. — We have lately seen an account of a case in which Dr. Harley succeeded in restoring a young woman who had accidentally swallowed six drachms of a mixture of laudanum, chloroform, and hydrocyanic acid, by pouring cold water on her forehead. After drinking the mixture she immediately vomited a portion of it, and then fell down comatose. Dr. Harley administered hot coffee and nitric ether, and tried artificial respiration. No great improvement was perceptible; but on the application of cold water to the forehead the effect was magical. The patient began to breathe more freely, and she lost some blood from the nose. As soon as the affusion of cold water ceased the coma returned, and was again removed by renewing the affusion; the patient soon moved her arms and legs, and seemed anxious to avoid the stream of water, as if it caused her pain. This treatment was renewed at intervals until the following day, and after the lapse of sixty hours all bad symptoms disappeared.

ORIGINAL COMMUNICATIONS.

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CASES OF EPILEPSY, CONVULSIONS, GIDDINESS, ETC.

PART OF A SERIES ILLUSTRATING AFFECTIONS OF THE NERVOUS SYSTEM, OF ORGANIC AND INORGANIC ORIGIN, WITH CLINICAL AND PATHOLOGICAL OBSERVATIONS.

By JOHN W. OGLE, M.D., F.R.C.P.
Assistant-Physician to, and Lecturer on Medical Pathology at, St. George's Hospital.

(Continued from page 220.)

Case 39.—William W., aged 16, a delicate-looking child, whose family was, however, free from epilepsy. For two years he had been the subject of attacks of epilepsy coming on every one or two weeks. No cause for these was known.

Ordered jalap and calomel powder twice in the week, and quinine and iron twice a-day.

On the next visit, at the end of a week, it was reported that a very large number of thread-worms had been voided by the bowels, but that no fit had occurred. At the end of the second week two fits had taken place, when the tongue was bitten, and he hurt one of the hands very much in the struggling. No more worms had been passed. At the end of two more weeks no fit had occurred, but during the following fortnight one fit was reported, a bad one, in which the tongue was again bitten. No worms had passed. During this time the powders and the medicine were continued. During the next month three attacks occurred, which, like the former ones, were not preceded by any warning.

Ordered the syrup of iodide of iron, and to continue with the purgative powders.

Five weeks then passed over in which no convulsive or other attacks took place. One fit then occurred, and after that a fortnight elapsed before there was another one. This last was followed by an hour's sleep.

The patient then ceased to attend.

Case 40.—Charles K., aged 16 months, pale and delicate, of costive habit. When cutting his teeth six months previously, he began to roll the head in a very singular manner, and this rolling had continued ever since. About three weeks before being seen he had fallen down suddenly after having an attack of scarlet fever, and was brought to the Hospital in consequence of being so frequently drowsy.

There was slight cough, but, excepting the drowsiness and the rolling of the head, nothing more was noticeable. There was no albumen in the urine. Under the use of castor-oil, small doses of the hydr. c. cretâ and rhubarb, and the syrup of iodide of iron, the child recovered from all of these symptoms.

Discharged at the end of three weeks, as being apparently well.

Case 41.—Maria R., aged 8 years, a healthy, well-nourished child, was admitted into the Hospital with a deep burn on the right arm, and a slight one on the left one, as well as on the neck and lower part of the face. Under the use of cotton wool and calamine cerate she went on well, and was removed home by her friends. Not going on so well she was brought back again on the following day. She then went on fairly well for two weeks, complaining only at times of pain in the bowels, which were for the most part confined. Subsequently the little finger sloughed, and had to be removed by operation, and an awkward contraction of the fingers remained. She continued in general good health until five weeks after her first admission, when she was seized with "convulsions." Twenty minutes afterwards both pupils were found to be dilated and insensible to the action of light, and there were still convulsive movements of the muscles of mastication. The pulse was very weak and frequent, but quite regular. In the attack of convulsions the tongue was not bitten. Subsequently the convulsions recurred, and continued without complete remission during the whole of the night, and during their occurrence the tongue was deeply bitten, and much blood came by the mouth. In spite of ice to the head, a blister to the nape of the neck, and turpentine injections, she never recovered consciousness further than to be able once to ask for the bladder containing ice to be removed from the head.

Throughout the following day the "fits" continued to take place, and she died the next morning.

On post-mortem examination the blood-vessels of the brain and its membranes were found to be unusually full, and the subarachnoidean fluid was increased in quantity. A slight amount only of clear fluid was met with in the cerebral ventricles. Hothing further was found worthy of note. Intestines not ulcerated. (a)

Case 42.—George O., aged 5 years, of delicate appearance, had been the subject for several months of convulsive attacks attended by unconsciousness. These were generally preceded by fits of laughter, and followed by deep sleep. Thread worms were known to have been passed. Under the use of calomel and compound scammony powder large numbers of the worms were parted with. Cod-liver oil and steel wine were given, but at the end of two weeks attendance ceased.

Case 43.—Louisa P., aged 13 months, a healthy child, who was "teething," was brought into St. George's Hospital owing to a scald by boiling water on the right side of the face, down the right arm, and half way down the right side of the chest. On the following morning she had an attack of spasmodic dyspnœa, and there was convulsive action of several of the muscles of the body, the lips became blue, and it was feared that death was at hand. From this attack she recovered; but others of the like kind came on about two hours later. From these again she rallied; the pulse became natural, the aspect rational, and she took sufficient food. The child remained well until the afternoon of the following day, when a fresh series of similar seizures occurred, which at last terminated in death.

On post-mortem examination the only thing found worthy of notice was congestion of the lower part of the lungs, and a more than ordinary vascular condition of the lining of the bronchi. (b)

Case 44.—Mary Ann D., aged 9 years, healthy looking, with a healthy family history. She had had whooping-cough three years previously, when she "broke a blood-vessel, and spat blood." For above three months she had been subject to attacks of epilepsy, which generally occurred weekly, and for the preceding five weeks had regularly come on every Sunday. The seizures came on suddenly and without any other warning than pain at the right temple, which existed for a very short time before the occurrence of the fits. In the attacks she was sometimes delirious, often bit the tongue, and sometimes foamed at the mouth. She was generally unconscious during their occurrence, but not always so. In the attacks also she was described as "going very black about the eye and mouth," and the eyes were described as being very blood-shot. She generally screamed after the fits, and often had nausea for some time, but was not sick so as to vomit. Very often the attacks lasted for above an hour in an active form, and not infrequently she lay during their occurrence for three, or even four, hours without speaking. No intestinal worms were known to exist, and no cause for the attacks could be traced.

Ordered small doses of the hyd. c. cretâ, carbonate of magnesia, and cinnamon-water every night, and quinine with sulphate of magnesia twice a-day.

After the end of the first week the attacks ceased, and during the three weeks that the child continued under treatment the seizures were not repeated. After that time she unfortunately ceased to attend the Hospital.

Case 45.—John A., aged 4 years, was brought into the Hospital with a superficial burn of the arms, face, and chest. He recovered tolerably well from the collapse. Convulsions, however, suddenly came on, and he died eighteen months after admission.

On post-mortem examination the vessels of the scalp and of the brain with its membranes were found to be congested, but nothing more worthy of note was met with in the body. (c)

Case 46.—Eliza H., aged 2 years, delicate-looking child, had been suffering from impetigo and inflammation of the pudenda, following measles, when whooping-cough came on. There was much febrile disturbance, which increased in spite of emetics and nauseating doses of ipecacuanha, etc. One evening she, for the first time, was attacked by "convulsions," soon became semi-comatose, and died in the space of twelve hours.

On post-mortem examination, the vessels of the brain and its membranes, including the pons Varolii and medulla oblongata, were found to be very congested and dark, and the grey matter of the brain was more than ordinarily pink, but quite firm. There was no accumulation of fluid in the ventricles, and nothing further of note was observed about the cranial contents. There were a few scattered tubercles in the lungs, which were in some parts hepatised. (d)

Case 47.—Frederick W., aged 3 years, delicate in appearance, but of healthy parents, had been subject to what were called "convulsive fits" at times, ever since he was six months old, when he was "teething." For the six months before being seen he had, however, had no severe fits, but been subject to attacks of sudden screaming, in which he also stared in a very unnatural way, described by the mother as being "hysterical" in nature. The boy was intelligent in appearance, but could only say a few words; and in laughing it was clearly to be seen that the mouth was drawn to the right side. There was strabismus of the left eye (divergent). It proved on examination that there was a want of power of the left arm; the legs were, however, equal in power, and he could walk well, and it turned out, on minute inquiry, that when he had the convulsive attacks during his teething he had lost the use of the left hand, and of the left leg to a certain degree, but that the use of the leg had been perfectly regained. Moreover, the thumb of the left hand was forcibly flexed into the palm. The family history was good, excepting that one brother, who died when between four and five years old, had been subject to "fits" before his death.

Ordered the iodide of potassium, along with bark and chloric ether twice a-day.

For three weeks the child was brought to me, but after that I saw no more of it.

Case 48.—Henry W. D., aged 3 years, was admitted into the Hospital with an extensive scald of the thighs and lower parts of the abdomen. On the evening of the following day the boy gave a start, and all the muscles of the body became suddenly convulsed, the face livid, and the eyes fixed. He became perfectly unconscious, and shortly afterwards spasms, very much resembling general tetanus, came on, chiefly about the mouth, and slight trismus occurred. The pulse was rapid; the bowels confined. A dose of calomel and Dover's powder was at once given, and a saline, containing an opiate, every four hours. Momentary spasms continued throughout the day at intervals, chiefly about the face. He was very restless, and the eyes were fixed. The pulse varied much as to frequency. No pain was complained of. On the day but one after admission he was quieter, and the skin was cool. The face was, however, flushed, and the pulse 120 per minute. Both pupils were noticed as being contracted. He was still in a state of unconsciousness. On the next day he became sensible, and all spasm had ceased, and in the evening he took notice of friends. He drank port wine and milk.

On the day but one after the burn sloughing commenced, and the boy began to doze, and on the next day both pupils had become noticeably dilated. Opisthotonos came on along with much "rolling about" on the face and back. He became semi-comatose, the eyes being fixed. Sordes of the mouth and throat supervened, and he died on the eighth day after admission.

On *post-mortem examination*, forty-two hours after death, the veins of the brain were found rather fuller than usual, otherwise the cranial contents were natural. The spinal cord was healthy, but it was observed that a lobulated collection of fat existed between the spinal dura mater and the periosteum lining the vertebral canal, and extending down from the lower part of the cervical to the middle of the dorsal region. Other organs were natural. No intestinal ulceration existed. (e)

Case 49.—Richard W. aged 2½ years. Excepting a cough which he had had for four months, the patient had been in good health since birth. The cough, attended by dyspnœa, had been worse for two weeks, owing to which he was admitted into the Hospital. In spite of treatment, congestion of the lungs came on. On the second day after admission he was seized with an epileptic fit, which was followed by several others during the night. On the following morning there was great lividity of the face, and the hands were tightly clenched, the pupils being greatly dilated. There was a remission from attacks during the following day, but again they came on towards evening, at intervals of about ten minutes, until 8 or 9 p.m., when he died.

(a) See *Hospital Post-mortem Book*, 1855, No. 57.

(b) See *Hospital Post-mortem Book* for 1852.

(c) See *Hospital Post-mortem Book*, 1857, No. 123.

(d) See Fol. 210, *Hospital Post-mortem Book* for 1845.

(e) See *Hospital Post-mortem Book* for 1858, No. 82.

On post-mortem examination the lungs were found to be congested posteriorly, but the brain and other parts were found to be natural, excepting that the vessels were loaded with blood.

ON THE
ADMINISTRATION OF CHLOROFORM.

By ARTHUR ERNEST SANSOM, M.B.,

Late House-Physician and Physician-Accoucheur Assistant at King's College Hospital.

SEVERAL unfortunate cases of death attributed to the use of chloroform have lately brought before us the question of the safety or danger of the anæsthetic. Falling upon the public ear these produce an alarm greatly disproportionate to their real significance; people are more ready to appreciate the positive evil than the less definable good. To Medical men they have the wholesome effect of teaching a lesson of caution, and of urging every one to try his utmost to avert the danger of what has been, in thousands of instances, a priceless boon. To estimate the exact expression of the danger of chloroform is a hopeless task; but sufficient data are before us to show that this danger is, positively, very much less than the prominence of the fatal cases would suggest. Three years ago, Dr. John Chapman (a) estimated that the chances of chloroform proving fatal in a given instance were about 16,000 to 1. During the Crimean war chloroform caused death in one case; it was employed 40,000 times or more.(b) At the lowest computation I consider that chloroform has, up to this period, been administered 2,000,000 times; the deaths which have come to our knowledge are rather over 150. Taking these things into consideration, and bearing in mind, moreover, that several deaths have been from other causes, in all probability, than actually the chloroform, it would seem that the real danger of chloroform is not greater than that of many of the potent drugs contained in our own Pharmacopœia. I have said that other causes than the anæsthetic swell the records of death,—negligence and carelessness in the administration are among these. I have records of three deaths in cases where the patients themselves were the administrators, and I believe another cause is Fear. It is very right to bear in mind that cases of sudden death during operations occurred before the use of chloroform; and it is well known that such a case had very nearly sealed the fate of chloroform at its very first introduction. However these considerations diminish our distrust, we must not lose sight of a fundamental fact, that 150 deaths are attributed to chloroform; that of these the great majority are undoubtedly the sole effect of the anæsthetic itself.

I have formed a record of eighty-four cases of death from chloroform; these, collected a year ago, were all which I could find narrated with sufficient care to enable us to found any broad conclusions upon them; I propose now to investigate these, and, together with the evidence of a frequent practical experience of the use of chloroform, to endeavour to elicit certain rules and cautions.

Chloroform is more fatal to men than to women. In Dr. Snow's cases the numbers were three men to two women; in those collected by Scoulteten, two to one; in those by Dr. Kidd, four to one; in cases which I have myself collected, twenty-three to ten. Instead of halting at once for an explanation of this fact, we shall find it better worth our while to investigate further what class of persons are more favourably or less favourably acted upon by chloroform; and we shall find a well-established law that the weak have less to fear than the strong. When chloroform is given to a healthy, muscular man, there is frequently seen more resistance of the process, more contortion of the limbs, and congestion of the face; finally, when anæsthesia is established, there is a deeper coma, a more profound stertor. In those cases in which chloroform has proved fatal to men in the prime of life, either there has been an early resistance and death early in the inhalation, or else a difficulty has been experienced in inducing the anæsthetic state, and there has been a sudden change from calm to collapse. To instance the first of these modes, a man of twenty-four once died in half-a-minute from the commencement of the process. (c) Again, a man of forty-nine expired, in the Bristol Infirmary, three minutes from the commencement, dying, the narrator says, as suddenly as if he had been poisoned by prussic acid. On the other hand, in a case occurring at Auxerre, (d)—a man of forty-five—three minutes only served to induce great muscular excitement. In five minutes more sensibility was still unaffected. Not until ten minutes had elapsed was insensibility established; then, just at the commencement of the operation, death occurred. When we give chloroform to a more debilitated patient, we see him submit to the anæsthetic influence calmly and quietly; the stage of muscular excitement is short, and the movements slight; a gentle sleep seems to be produced. Still testifying to the truth of the tolerance of chloroform better by the physically feeble is the fact that the age most prone to death is that which is called the prime of life, the average being between thirty and forty, Chloroform is very favourable to children. I can find recorded no death under five years of age. And, again, a fact pointing to the same end is this, that the greatest frequency of death is in cases of the most trivial operations,—that is to say, a patient, the severity of whose disease has not only rendered a severe operation necessary, but also debilitated his constitution, stands a better proximate chance than a healthy man who comes to have a tooth extracted or a toe-nail removed. I append a table of eighty-one cases:—

Nature of operations.	No. of cases.	Per cent.
I. Minor operations . . .	61	75·3
II. Removal of breast; amputation of foot	4	4·9
III. Capital operations . . .	7	8·3
IV. Natural labour	3	3·7
V. Relief of pain (neuralgia, lead colic, tooth-ache) . . .	3	3·7
VI. Delirium tremens and maniacal excitement	3	3·7

This truth, the comparative immunity of pâtients about to undergo capital operation was elicited long ago, and was generalised as the "Law of Tolerance." I have here quoted it as a part of that law rather than as the whole, the general law being that the physically feeble, from whatever cause, bear chloroform better than the muscular and robust. And the law obtains not only as regards the proximate, but even as regards the remote effects of chloroform.

In an essay on the mortality after amputations,(e) I think I clearly proved by figures that there has been in the years subsequent to the introduction of chloroform a very considerable decrease in the death-rate from capital operations. Further analysis led to a conclusion that though in operations undertaken for disease the death-rate had fallen very much lower than previously, in operations rendered necessary by severe injury the mortality was as great if not greater than before. In the years 1837—42 the mortality after amputation for disease was, in general terms, 33 per cent.; in 1854—57 it was 19½ per cent. Particularising,—mortality after amputation of the thigh in the one period as compared with the other was as 29 to 20; of the leg, 44 to 20; of the upper extremity, 23 to 11. In every instance, therefore, of these amputations for disease the mortality has decreased. When we turn, however, to amputations rendered necessary on account of severe injuries we do not find things in any way so favourable. Certainly in the aggregate of all traumatic amputations it seems that the mortality of the years 1837—42 is greater by 4 per cent. than that of the years 1856-57; but this difference is insufficient to establish more than about an equality. Then, to particularise, traumatic amputations of the thigh were 58 per cent., in the post chloroform period 60 and 64 per cent.; an increase in the one case of two, in the other of four per cent. Traumatic amputations of the leg seem rather more favourable in the later period. The conclusion to which these considerations led me was that it is scarcely advisable to use chloroform in cases wherein severe injuries rendered operations necessary. Men in robust health are not so well calculated to withstand the accumulated shocks of a severe injury, a severe operation, and a sudden suspension of their faculties, such as chloroform induces, as those whose powers of life have, as it were, gradually submitted themselves to the dominion of disease, and who are struck but by one sudden blow—the operation. However its individualities may be explained, I believe this principle to be of universal application, that, as subjects for chloroform, the weak are better than the strong, children better than women, women better than men, and people of earlier youth or more advanced age better than those in the prime of life. In children it has been said, and to my mind with great show of reason, that a cause of their immunity is the greater irritability of the heart. The greater the automatic power of the heart the greater is the difficulty of overcoming its contractions by means of chloroform ; and very interesting gradations are shown in the different classes of animals in reference to this, as I have observed before.(f) In children the heart, from its great inherent automatism, continues to contract, in spite of the subduing influence of the chloroform, and so the round of other processes is preserved unbroken.

(a) *Westminster Review*, January, 1859.

(b) See *Revue des deux Mondes*, April, 1857,

(c) Faure, *Arch. de Médecine*, 1858.

(d) Faure, *loc. cit.*

(e) Prize Essay of the Medical Society of King's College. London: Churchill. 1859.

There are very few conditions of the system in which chloroform, though indicated by convenience, must be withheld on the ground of safety. First among these are certain poisoned conditions of the blood : uræmia is a type of these, as Mr. Erichsen has pointed out. I have a very strong opinion that chloroform should be prohibited in acute cases of alcoholism—in delirium tremens. The number of deaths from chloroform given in the course of delirium tremens is too large, I think, for it to be advisable to continue the use of the anæsthetic in these cases, and the patients exhibit a dangerous peculiarity in their behaviour. Such are, I think, the only conditions necessary to particularise which preclude the administration of chloroform. Others there are (such as advanced stages of organic disease) for which no other rules can be laid down than those suggested by the good sense of the Physician who conducts the inhalation.

In the case of intemperate persons the exhibition of chloroform is attended with a certain amount of danger. Chloroform cannot be forbidden, but great care must be used in its administration. In the records of death very frequently intemperate habits are ascribed to the patients, thus—"intemperate dragoon," "inveterate drinker," "hard drinker," "intemperate student." These are excerpts from the records themselves. When chloroform is given to such persons it manifests its effects in a peculiar way, as I have had frequent opportunities of noticing. A great deal may be given without the slightest apparent effect being produced ; then there is a stage of violent excitement, perfect sensibility existing during the whole time. Suddenly are induced not only complete insensibility, but also profound stertor and coma. These cases therefore I believe, of all others, require that chloroform should be administered in the most careful manner.

When there is extensive disease of the lungs there is danger of death from asphyxia, though this scarcely ever or never happens, except in cases wherein respiration is obstructed. A case of death by asphyxia caused by chloroform is recorded in the *Gazette des Hôpitaux*, 1858, No. 69. The lungs were found to be very extensively tuberculous. I quite agree with those who urge against the exhibition of chloroform for the operation of tracheotomy, not only on account of the present danger, but because the necessity for anæsthesia is comparatively little. In cases of mal-aeration of the blood there is a depression of sensibility, so that the very object of the anæsthetic is partially pre-accomplished.

I have said that advanced stages of certain organic diseases would preclude the administration of chloroform. This expression would embrace advanced disease of the heart, yet I would not exalt it in importance above diseases of other organs. I do not believe that slight disease of the heart in any way interferes with the administration of chloroform. Of all conditions of the heart, that which is the most unfavourable is an imperfection of its fibre—a vacillating and intermittent pulse is the sign that care must be taken. I believe that there is not the slightest occasion for making these cases paramount against chloroform administration. More harm than good is done by fostering this fear of chloroform in cases in which it is supposed that the heart is diseased.

The following table is intended to show the relative danger of chloroform-administration in the various conditions of patients :—

Degrees of Danger in the Administration of Chloroform.

Greatest danger,—

	I.	Uræmia, delirium tremens .	Age, 30 to 40.
	II.	Shock from injury(g) . .	
Males .	III.	Threatened asphyxia, serious imperfection of muscular structure of heart . .	
	IV.	Advanced organic disease .	
Females.	V.	Habitual drunkenness . .	
	VI.	Prime of health and strength	
	VII.	Debility(g)	
Children		. . . .	5 and under.

Least danger,—

A very important point is to employ pure, freshly-prepared chloroform. Some that has been placed in my hands to use I have found very weak and poor. Some has been diluted with alcohol, other has excited distressing cough early in the inhalation ; this is mostly from contamination with chlorine compounds. In two cases of death from chloroform, the notes of which I have by me, the chloroform was impure. One is recorded in the *American Journal of the Medical Sciences* for July, 1858. The other was the case of the soldier during the Crimean war.

Chloroform should have a density not less than 1·48 As a ready test of this, pour a little into a mixture of equal parts of water and sulphuric acid ; if the chloroform is of sufficient density it will sink to the bottom. If the chloroform contain ether or alcohol it will readily take fire, not so if it is pure. Another test of the presence of ether or alcohol is Letheby's, which is ready and valuable. Add the suspected chloroform to a solution of the albumen of egg ; if pure, no change will result, but coagulation will ensue if ether or alcohol be present. If chloroform be kept for a considerable time, especially in the light, it is apt to decompose ; various chlorine compounds are the result, and free chlorine is suspended in the mixture. This is the most dangerous contamination of chloroform. It can generally be recognised by its odour if a little be poured upon the hand and allowed to evaporate ; or if dry chloride of zinc be shaken together with the suspected chloroform, a dark brown chlorinated oil is thrown down (Duroy). The best safeguard is to use chloroform prepared by well-known and conscientious chemists, and to purchase at a time only sufficient for four or five inhalations. The best chloroform that I have used is that prepared by Duncan and Flockhart, of Edinburgh ; or Bullock, of Hanover-street, London.

(To be continued.)

ON THE WINTER CLIMATE OF AJACCIO.

By ROBERT WALKER, M.D.

Ajaccio, the capital of the Island of Corsica, latitude 42° longitude 8°, contains about 14,000 inhabitants, and is situated on a splendid bay of the same name, facing the sea to the south and south-west, and surrounded landwards by a range of mountains, which approach close to it on its north-western side, and thus afford most perfect protection from the dreaded mistral, or north-west wind, while to the north and eastward there is an undulating plain of some twenty miles between the bay and mountains, several of which are nearly 10,000 feet above the sea-level, and covered with snow even in summer.

The town itself is built upon a sloping tongue of land, which projects into the bay, and is thus partially surrounded by water ; the streets are straight, well paved, and clean, most of them being planted with trees, the principal one with a double row of orange-trees, which look charming in winter when full of fruit, and in spring scent the air by their blossom. The market-place and principal square, or "place," are both very fine, and afford magnificent views of the bay and mountains beyond ; the former contains an allegorical statue in marble of the first Napoleon, and a large bronze group of himself on horseback, and his four brothers unmounted, is nearly finished in the Place. This being the birthplace of the Napoleon family, almost every street bears the name of some one of its members; the house of the first Emperor has been restored by the present one, and may now be seen in nearly the same state as when the great man occupied it. A beautiful marble mausoleum has also been recently built, in which his mother Selitia, and several other members of the family are buried. A picture gallery containing upwards of 1000 paintings given to the town by Cardinal Fesch, adjoins the mausoleum. The Prefecture is a handsome modern building, as also the Town Hall, and there is a pretty little theatre with an Italian company. Besides these, the town itself affords little of interest, and owing, doubtless, to its being visited hitherto by few strangers, the hotels are neither very good nor clean, and there is little accommodation elsewhere. But the natives are becoming fully aware of the value and exceptional character of their climate, and this state of things promises to be speedily remedied; indeed, several villas are in process of building, specially to meet the wants of English visitors. There is already an English company for supplying the town with gas, and a new hotel is talked of under the same auspices. The shops generally are neither clean nor inviting, and the supply of provisions, especially meat, somewhat limited in choice as well as quantity, but the bay always affords abundance of fish, which are cheap and good; game, too, is abundant, and other articles can be procured from the continent by the steamers. During the winter there is a plentiful supply of water, which is drawn from a reservoir situated at a distance of four or five miles. In summer this water of necessity becomes warm as well as less pure and plentiful, but it can always be had cool and fresh from several springs in the vicinity. The sanitary state of the town is very good, and epidemics of any kind rarely prevalent, owing probably to its being less crowded, and its streets wider and more open than in many continental towns. In the summer and autumn months there are no doubt a good many cases of malarial fever in the neighbourhood, some even in the town itself, but these usually occur in a class of people who can not or will not take proper care, and are rarely fatal or even severe. They are becoming less numerous, owing to better drainage and other sanitary precautions. During the winter months no cases are to be met with, and the visitor has nothing to fear on this head. The gentry, Corsican as well as French, are most kind and hospitable to strangers, and leave nothing to be desired in that respect. Still, any invalid much dependent on home comforts, and expecting the same at Ajaccio, must meet with disappointment at present, but doubtless the increased communications with the continent will soon break down the isolation of the place, and render it, as regards accommodation, more equal to other places of winter resort.

(f) *Lancet.*

(g) These relations also apply to the probabilities of recovery from operations done under chloroform in the two states respectively.

The country around Ajaccio is most picturesque, and the views of sea and mountain in every direction varied and beautiful. A fine road extends for miles east and west along the shore, which is rocky, with intervals of smooth sand, and abounds in many rare shells, the collection of which affords an endless and most interesting occupation, at the same time securing an agreeable and sheltered walk. The roads in all directions are excellent, and pleasant for travelling; the bay, too, is nearly always calm and tempting for a row, though but little used for this purpose by the natives, and the views from it are perhaps the most lovely of all. The vegetation may be taken as an index of a mild and equable climate, for here the lemon-tree flourishes and bears fruit all the year round in places a little sheltered, and is rarely injured by cold, although, as is well known, two degrees of frost are sufficient to kill it. Orange-trees are abundant, apparently growing wherever planted; the palm is to be found in most gardens, though I believe its fruit rarely comes to maturity; the caroba and india-rubber tree grow out of doors, and the aloe and cactus abound everywhere, while the olive-tree clothes the lower hills, and the ground, wherever not under cultivation, is covered with "maquis," which consist of the cystus, lentiscus, myrtle, arbutus, the splendid Mediterranean heaths, etc.; all the fruit trees belonging to such a latitude grow luxuriantly here. The almonds are in flower by the middle of January, and, being numerous, form for the time a striking feature in the landscape; they are soon followed, however, by others, both wild and cultivated. Many of our wild as well as garden plants flower all winter in the open air, such as geraniums, heliotropes, several kinds of roses, and many others. Numerous varieties of the orchid and lily tribes, amongst others, are to be found in flower early in spring, and the ferns are well represented, but violets are not to be met with till the mountains are reached, a considerable distance inland; and I believe that the Flora of Ajaccio is less numerous than that of some other parts of the Mediterranean coast, especially the Riviera.

The weather during the winter is usually fine, the atmosphere clear, and the sky at times without a cloud for many days in succession; the number of rainy days is small, but the rain falls heavily, and never lasts long. There are occasional overcast, thoroughly wet days, resembling English November, but without the cold, for the rain most usually comes from the south or south-west, and is accompanied by a high temperature. Much more rain, no doubt, falls on the mountains in the interior, as may frequently be seen when in the town and neighbourhood it is fine and sunny. Owing to the dry, porous, and uneven nature of the soil, the heaviest rain is absorbed almost immediately, and forms no obstacle to going out when once it has ceased; indeed, after rain, even in midwinter, there is such an indescribable purity and freshness of the atmosphere that it is perhaps the most pleasant time of all for being out of doors.

Ajaccio is but little subject to winds; the most prevalent are south-westerly, and blow directly from the sea, but are rarely violent. By its situation, at the foot of a high range of mountains running in a north-westerly direction, it is well protected from the mistral which is the bane of southern France, especially during the earlier winter months. The sea-breeze of the day and the land-breeze of the night are generally well marked, and with a distinct interval between them; the former lasts for several hours during the middle of the day, varying with the season of the year, is occasionally strong, but always pleasant and refreshing; the latter has rarely much force, but descending after sunset from the snow covered mountains is chilly and piercing, and should be carefully avoided by invalids.

The following observations were taken with a self-registering thermometer, exposed to the north, but in the shade, and guarded from the action of reflected heat, and about 300 feet above the sea level. At the Military Hospital, in the centre of the town, a temperature two degrees higher was generally registered.

December, 1862, from the 13th to the end of the month, the weather was generally brilliant, and there were many cloudless days, but it was unusually cold, the thermometer being below 40° many nights in succession; once it stood at 33°, and fears were entertained for the safety of the lemon-trees and other vegetables. Rain fell on three days, one only being thoroughly wet; the wind was little felt. The average maximum temperature was 53·5°; average minimum, 40·4°. The highest point at which the thermometer stood was 56°, and its lowest, 33°, leaving an extreme range for the month of 23°.

January, 1863.—The first half of this month was unsettled and rather stormy, and the latter half particularly fine, the prevalent wind being north-west and west; rain fell on eight days, two only being thoroughly wet and overcast; the other six showery, with intervals of sunshine. The average maximum temperature was 53·4°; average minimum, 43·2°. The highest point at which the thermometer stood was 60°, and its lowest, 40°, leaving an extreme range for the month of 20°.

February.—This month was fine throughout, no rain fell, and the wind was little felt. There were several unusually cold nights, accompanied by a clear, cloudless state of sky, as in December, and flakes of ice occurred even at the sea level in exposed places. The average maximum temperature was 54°; average minimum, 40·5°. The highest point at which the thermometer stood was 58°, and the lowest, 33°, leaving an extreme range for the month of 25°.

March.—The weather during this month was less settled than before, the wind was stronger and more felt, but was generally westerly, and there was an absence of cold; rain fell on more days, one day only being thoroughly wet and overcast; on eight others rain fell at intervals, and the rest of the month was more cloudy than its predecessors. The average maximum temperature was 58·6°; average minimum, 44·7°. The highest point at which the thermometer stood, 62, and its lowest, 39°, leaving an extreme range for the month of 23°.

April.—This month was particularly fine, and marked by an even temperature, and absence of wind; the only rain which fell consisted in some heavy showers on one single day. The clouds were light, and sunshine almost uninterrupted the rest of the month. The average maximum temperature was 64·4°; average minimum, 49·6°. The highest point at which the thermometer stood, 69°, and its lowest, 46°, leaving an extreme range for the month of 23°.

It will be noticed how very little the average maximum temperature differs during the three first months, and though the minimum does not vary much, I feel convinced that in ordinary years it would do so to a less degree, for every one considered the very cold nights in December and February quite exceptional. In the latter part of March there is a sensible increase of temperature, and by the end of April the sun has become scorching, and the temperature too high for invalids to remain with comfort or safety. The middle of October would be a proper time for going to Ajaccio with a view of passing the winter months, for then the excessive heat is past, and the last vestiges of autumnal fever have disappeared.

Owing to the very sheltered situation of Ajaccio, and the all but constant fine weather, winter may almost be said not to exist here, cold—as such is considered in England—being unknown; indeed, the sun is always so powerful that a green umbrella will be found an agreeable, if not an indispensable, protection. The little harmless lizard may be seen basking himself all day long, and the swallow skimming overhead. The beauty of the scenery, too, affords the greatest temptation for being out of doors, and, with proper precautions, there are few days on which even great invalids may not pass several hours in the open air; but these precautions are as necessary, perhaps even more so, here than in England, for it must never be forgot that it is winter, that the heat is sun-heat, and that in the shade or after sunset the air is necessarily cool, and the change from heat to cold greater and more sudden than is experienced in cooler climates. The nights and mornings are always more or less chilly, and warm woollen clothing will be found a necessity; indeed, as has frequently been urged of late, it is a mistake to suppose that such can be dispensed with during winter in any part of Southern Europe.

No comparison can be made between the amount of out-door exercise any invalid may safely obtain here and in the most favoured English winter resorts, that, too, in sunshine, and with a perfectly clear atmosphere, for mist and fog are unknown; indeed, in respect of climate and hygiene, I believe Ajaccio to be equal to any of the best-known places in Southern Europe, while in a social aspect it is rapidly improving, and its isolation giving way before the increased communications with the continent. Corsica may now be reached almost daily by steamers, which run from Marseilles, Nice, and Leghorn in twenty, twelve, and seven hours respectively, and to the traveller it offers a wide, interesting, and hitherto nearly unexplored field of action.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CASE ILLUSTRATING THE EFFECTS OF NERVE-SECTION ON NUTRITION AND ANIMAL HEAT.

[Communicated by Mr. Hutchinson.]

Division of the Ulnar Nerve just above the Elbow-joint—Complete and Permanent Anæsthesia of the Integument Supplied by it—Inflammation of Part of the Hand, ending in Resolution—Painless Ungual Whitlow of Little Finger, with Exfoliation of the Skin and Nail—Perfect Reproduction of the Nail—Contraction of Three Fingers (Unexplained)—Particulars of the State of the Arm as to Nutrition, Animal Heat, etc., Twenty Months after the Accident.

[For an opportunity of examining the case recorded in the following notes I was indebted to the kindness of Dr. Powell, the Resident Medical Officer of the Hospital.]

Rose W., a rather delicate girl, aged 14, was brought to me on May 28, 1863.

In October, 1861 (twenty months ago), she sustained a very severe lacerated cut across the back of her right elbow, by pushing it backwards through a pane of glass. The cut was very deep, and a part of the skin was taken quite away. She was admitted into the London Hospital under Mr. Critchett's care. It was three months before the wound was perfectly closed. With regard to immediate symptoms, she describes most accurately the parts which "were quite numb from the very minute she did it,"—these are those supplied by the ulnar nerve. She states also that there was great swelling of the back of the hand, and that an abscess was feared, but it went away. She had great pain in the middle and ring fingers. There does not appear to have ever been any reason to suspect injury to the elbow-joint itself.

Present Condition.—There is a large supple scar just above the back of the elbow-joint. The whole arm is thinner than the other, the difference being most marked in the lower half of fore-arm. The hand is very much thinner, and about the little finger the muscles are wholly wasted. The metacarpal bone of forefinger is left bare of muscle, and the fleshy mass between it and the thumb is much thinned. The middle, ring, and little fingers are curved into the palm, the ring finger more than the middle one, and the little finger most of all. She cannot straighten them, nor can they by force be bent back into a perfectly straight position. The attempt to do so gives her no pain, but she says it "drags someting at her elbow." Their being curved forwards is not due to paralysis of the extensor, for all the tendons of the latter start up when she tries to extend them, and the first phalanges are bent back on the metacarpal bones, but the other joints remain much curved. The triceps is much wasted, and its tendon has probably been partly cut through on the inner side. The spot where the ulnar nerve has been cut is easily felt. It is a little above the internal condyle. There is a separation of the cut ends for the space of about a-quarter of an inch. Both ends are somewhat bulbous, but the lower much the more so, being enlarged to three times the natural size of the nerve. Pressure on these swollen ends does not cause much pain, but she complains of pins and needles if either of them are much pressed, more especially if it is the upper one.

Temperature, Sensation, and Nutrition.—I could not distinguish any positive difference of heat in the parts supplied by the ulnar nerve in the two fore-arms and hands. With the thermometer applied between the little and ring fingers, it appeared that there was about a degree minus on the paralysed side, but this observation was not very positive. There was not the slightest sensation in the little finger, nor ulnar side of ring finger, nor in the integument of the ulnar border of the hand. Sensation was defective, but not wholly absent in the palmar and dorsal aspects of the hand over the metacarpal bones of the ring and little fingers, and also along the ulnar border of lower third of fore-arm. The integument of the affected fingers looked a little redder than that of the opposite hand, but presented no other peculiarity. The end of the little finger looked less than the other, and its nail was not more than half the size of that of the other hand. She told me, in explanation of this, that some two months after the accident "the nail of this finger came off together with the skin like the end of a glove." She pulled it off one morning, and a new nail afterwards formed. The whole progress of the whitlow had been entirely without pain. I must ask attention to the fact that the new nail,—formed on a part wholly deprived of nerve influence (at least of cerebro-spinal),—was perfect in form, although not of normal size. The girl also stated that, in consequence of having no feeling in the little finger, she had several times burnt it, and that the sores had always healed well. The day on which I tested the temperature was very warm. Both the girl and her mother assured me that in winter the paralysed parts were usually much colder than the others. I do not at present know how to explain the flexion of the fingers into the palm which so commonly follows section of the ulnar nerve. In most of my cases the tendons of the fore-arm have been injured in the accident, and to their injury I have been inclined to attribute the contraction. Here, however, we have a case in which the nerve was cut high up, and without injury to any other structure, and in which the contraction was most marked. It is interesting also to note that it did not exist at first, but had, according to the patient's statement, gradually come on, and increased during the last six months. She considered that it was still increasing.

Mechanically, it is probably due to contraction of the inner part of the flexor profundus digitorum, aided probably by bending of the wrist by the flexor carpi ulnaris. These structures are supplied by the ulnar nerve, and must now be paralysed. It will be noticed that the contraction is greatest in the case of the little finger, less in the ring, and least of all in the middle one. The fibres of the deep flexor supplying the little finger are wholly dependent upon the ulnar nerve, whilst those more centrally placed received a supply also from the median. The clinical fact that paralysed muscles do sometimes shorten permanently, and even thus more than counteract their unparalysed opponents, is, I believe, not a new one to those who have paid attention to nerve diseases. It is, however, an exceedingly interesting and difficult subject. At first glance this case would appear to furnish a very definite illustration of it.

MIDDLESEX HOSPITAL.

FATTY DEGENERATION OF HEART—SUDDEN DEATH.

(Communicated by Mr. Devereux, Resident Medical Officer.)

J. H., aged 46, a saddler, was brought to the Hospital on March 2 last. He was dead when admitted. The following history was obtained from his friends:—He was a drunkard, and had had delirium tremens on one occasion. During the last three years he suffered from attacks of dyspnœa, especially after exertion. On the morning of his death he had hurried from his workshop to catch an omnibus. He had not ridden far before he slipped from his seat to the floor, and never spoke or moved afterwards.

A post-mortem examination was performed thirty-six hours after death. Rigidity moderate. The membranes of the brain were not unusually injected; each lateral ventricle contained a drachm of clear serous fluid; the substance of the brain was normal. Pleuræ non-adherent; lungs crepitant throughout; their substance was healthy, with the exception of slight emphysema. The heart weighed twelve ounces, was flabby, and of a light colour; both ventricles contained fluid blood; aortic valves competent, the mitral were thickened, the tricuspid slightly so; the right auricle was dilated; the first portion of the aorta was studded with calcareous deposits. On microscopic examination the transverse striæ of the muscular tissue was everywhere less distinct, and in several parts minute globules of oil occupied their place. The liver and kidney were normal.

TORBAY INFIRMARY.

STRUMA—ACUTE ŒDEMA OF RIGHT LEG—RADICAL CURE OF VARICOSE VEINS.

(Under care of Dr. PAGET BLAKE and Mr. J. B. TOOGOOD.)

[Reported by Dr. W. Bathurst Woodman.]

Susan M., aged 22, single, a stout girl, of intensely strumous habit, was admitted an in-patient at the beginning of February, 1863, for acute œdema of the right leg and foot, which were swollen to nearly double their usual size, and large bullæ had formed about the knee and on the calf. The ankle was intensely painful, leading to a suspicion of joint disease, but this proved an unfounded opinion. There was no particular redness, nor could the veins be easily distinguished, on account of the great swelling. There was no constipation, nor were the catamenia suppressed, and the immediate cause of the acute symptoms was rather obscure. Dr. Blake ordered rest, warm applications to leg, a slight aperient, good diet, and the syrup of iodide of iron, three times a-day.

Under this treatment her general health greatly improved, but as soon as ever she was allowed to get up, although a bandage was employed, she invariably relapsed into the former condition. The internal saphena vein, from the instep to the middle third of the thigh, was found to be extremely varicose, and was, it proved, correctly diagnosed as the "fons et origo mali." With the concurrence of Mr. Toogood, I therefore applied the twisted suture, by means of four pins—two above the knee and two below—bits of card, and stout silk. ℞. Træ. opii., ʒss. h. s. s. The next day the temperature of the leg was slightly less than the other, but the day after that the temperature rose about 4°, and continued rather high for a day or two, the spaces between the pins being very tender on pressure. On the seventh day the pins were removed; two of the pin-holes had ulcerated a little, but these were covered with zinc ointment, soap plaster, and a bandage, and gave no further trouble. On the twentieth day she was discharged, with directions to keep quiet at home, but in a week's time she went to service, where she has continued ever since with great comfort, and no return of the œdema. At the beginning of July, four months after operation, the veins appeared perfectly obliterated. It is rather curious that the same day on which I did this operation I saw a man on whom Mr. Erichsen had performed a similar one nearly fifteen years ago, and which had stood the test of time satisfactorily.

BRONCHO-PNEUMONIA—GANGRENE OF THE RIGHT LEG—INCIPIENT MULTILOCULAR OVARIAN DISEASE ON BOTH SIDES.

(Under the care of Dr. PAGET BLAKE.)

[Reported by Dr. W. Bathurst Woodman.]

Ann M., a single woman, who was housekeeper at a private Hotel, and gave her age as 45, although apparently older, was admitted on April 28, 1863, for bronchitis, attended with extreme dyspnœa. She had previously been a patient here for varicose ulcers on both legs, which were, however, nearly well. She was extremely reserved as to her past history, and it was from her mistress we learnt that she had suffered from bronchitic attacks for several winters past, which will account for the hypertrophied and dilated condition of the heart. About two days after admission she was attacked with pneumonia, affecting first chiefly the right lung, but afterwards the left also, and involving the lower two-thirds of both. Florid blood was freely mixed with the sputa, and continued to be so till death. She was a rather stout woman, and the treatment at first was by antimony, afterwards by salines, blisters, and careful attention to diet, etc. Under this treatment the pneumonia subsided, but the bases of both lungs still continued slightly dull on percussion, and the sputa still bloody, although less viscid.

On May 23 she became worse, the dyspnœa increased, and her appetite failed.

On the 24th she complained of intense pain in the right leg, from the knee to the ankle, and the leg was much swollen. The limb was elevated, and warm fomentations applied constantly to it.

On the 25th the leg was still more swollen—double the size of the other. Skin tense, almost to bursting; not red, but rather mottled, and still warm. In the evening I made an incision in the centre of the calf posteriorly, where the skin was most discoloured, in order to relieve the tension. She did not feel this; and although the knife was freely used, no blood escaped, but only a little gelatinous fluid. I could feel no pulsation in the popliteal or tibial arteries. I gave her some ammonia and ether. At 10 p.m. the dyspnœa was extreme, and her strength was rapidly failing, in fact, death had evidently commenced, and she succumbed at a little after eight next morning.

Sectio Cadaveris Eight Hours after Death.—Rigor mortis persistent. Body still warm, especially axillæ, inner side of thighs, etc., although it was in a very cool place. General œdema of trunk and lower extremities. Much appearance of bruising posteriorly from hypostatic congestion. A small bedsore on left buttock. Both legs much swollen, and on inner sides of tibiæ were large and purple cicatrices of old ulcers. The right leg much larger than other, as before described, and evidently gangrenous. The right half of the chest was full of bloody serum, and the lung of course compressed by it, and so solidified that it would not float. The left lung filled left chest, but was completely hepatised in lower two-thirds, and in patches in the apex. There were no pleural adhesions, nor tubercles on either side. About eight ounces of serum in the pericardium. The heart enormously dilated and hypertrophied, both sides filled with firm but recent clots; the mitral valves studded with small vegetations, and very incompetent. Tricuspid valves also incompetent, but less fringed. The liver very large, and of the true "nutmeg" character. The left lobe was largest, and had pushed the stomach out of place. The right lobe had commenced puckering on the surface. The kidneys appeared healthy; but the ureters were double the usual size, and the bladder also of large capacity. The brain, stomach, and intestines were not examined. Both ovaries were about double the usual size, and each contained from six to seven little cysts about the size of a common pea, though one or two were rather larger, filled with gelatinous fluid, and evidently degenerated Graafian vesicles. One recently ruptured Graafian vesicle was found on the exterior of the left ovary. One small cyst was found in the peritoneum, near the fibroid extremity of the right Fallopian tube, and two or three in the broad ligament. A fibroid tumour was found in the fundus of the uterus anteriorly and outside. The body and cervix of the uterus were greatly hypertrophied, the sinuses very large, the mucous membrane much congested, and a little blood on cervix, with a small clot in the os uteri. It should have been mentioned that, although the catamenia had ceased some months, the nurse reported her as menstruating three days before death. The case appears to me interesting as one of incipient polycystic tumours of both ovaries, which, had she lived, might have led to difficulties in diagnosis, especially had ascites supervened.

The blood in all the veins which we examined was coagulated more or less firmly, but the vena cava, right iliac, and femoral and saphena veins, of right side especially, were filled with uncommonly tough, but not decolorised clots. There were no clots in the arteries.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 26.

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MISS NIGHTINGALE AND INDIAN SANITARY REFORM.

We have on several occasions directed the attention of our readers to the Report of the Royal Commission appointed to inquire into the Sanitary Condition of the Army in India. We have shown how the recommendations of the Medical Officers have been systematically set at nought by the "authorities," civil and military. It is well known that the Commissioners placed the whole of the MS. returns from the several stations, made on the authority of the commanding, engineering, and Medical authorities, in the hands of a lady whose excellent common sense has already been triumphantly pitted against official circumlocution. The announcement that Florence Nightingale has a hand in Indian sanitary reform, will satisfy the nation that it is to be not a mere reform upon paper, but one that will be carried out thoroughly and honestly. The observations of Miss Nightingale appended to the official report have been published in a separate form, and these observations we desire now to bring prominently under the notice of the Profession. They consist essentially of an abstract of the entire mass of the stational returns, arranged under convenient heads, and accompanied by a brief running commentary, the earnest tone of which is quite in accordance with all we know of the doings and writings of their author.

It turns out that there is not a single station in India in regard to which we have not to accuse ourselves. The neglect of the simplest and, one would imagine, the most obvious precautions against the incursion of fatal diseases is not general, but positively universal. Did we undertake to demonstrate this, we might transfer to our columns the whole of Miss Nightingale's book; we will endeavour, however, to place before our readers the outline of the picture she draws, leaving it for themselves to fill it in by perusal of her little volume. Here, then, it is; and pray recollect that the description applies to every Indian station, without exception even of the Hill Sanitaria, the only variety being one of degree; nor are these shades much less deep in one place than in another.

It appears, then, that in every station throughout India the prevailing maladies are "camp diseases," depending upon the same causes, which not only abound, but exist in a state of perfection, such as would almost lead to the suspicion that a gigantic experiment on human endurance of filth and misery were in progress. The water supply is invariably bad, being brought by native carriers in skins from tanks or wells; the former the receptacle in many cases of the mere surface drainage of the land, and the latter collecting its supply from the soil, saturated to an extent even we Londoners are at a loss to appreciate fully, with the infiltration from neglected privies. We are thus not astonished to hear that at Agra the water is "laxative, and apt to disagree at first," and at Murree it is considered "inferior" even by native visitors, and that it is liable to cause colic. The Ulsoor tank at Bangalore, used for drinking, is the outlet for the whole drainage of a most filthy bazaar (125,000 inhabitants), for that of our cavalry, infantry, and horse artillery barracks, and of the greater proportion of the station. Yet though this description, *mutatis mutandis*, applies universally, so habituated are the residents to regard it as natural to India, that "most of the reporters consider the water as good and fit for use." In the second place, there is throughout the stations a total absence of all drainage, except into cesspits, and sometimes even these are wanting, the soil from the privies being carried away by hand, or else everything refuse is allowed to flow away as it may, or not flow away at all. When the cesspits are considered so full as to require emptying, their contents are carried away by hand. At Hyderabad we are told they are merely thrown out in the close vicinity of the cesspits, where anything edible is picked up by the birds and dogs; the soil is so saturated that "a noisome odour pervades the atmosphere." Foul ditches abound. At Poonamallee the foul ditch surrounds the fort and "encloses the Hospital," and "all fluid refuse sinks into the subsoil where it falls." This being the state of things where Englishmen are paramount in authority, we are not astonished to read that the native bazaars beggar all powers of description, being "simply in the first savage state of social savage life." "The country around some is stated to be one immense privy," to add to which, we read that in a village near Dinapore the dead are even buried within the huts. At Berhampore the nuisance is felt even at barracks. At one hill station, Nynee Täl, where men are sent for their health, the stench is at times overpowering. "Bazaars," says Miss Nightingale, "are the real hotbeds of disease, and require sweeping reform as much, or even more, than the stations." We will sum up in her own words the condition of the barracks in which we place our troops, so far as ventilation is concerned:—"The men are far too crowded in their Indian barracks. In almost every case there are too many men in the rooms for health. The floors in most barracks are merely the ground bricked over, or they are of stone, or a kind of plaster. At some stations the floors are of earth, varnished over periodically with *cow-dung!* a practice borrowed from the natives. Like Mahomet and the mountain, if men won't go to the dunghill, the dunghill, it appears, comes to them. With respect to the drinking habits of the soldiers, the gist of the stational returns is that all the men are "temperate." This is singular, inasmuch as a bad supply of water is usually believed to conduce directly to the contrary result. We should like to know the Indian idea of temperance; it certainly differs materially from our English notion of this virtue. The maximum Government allowance of drink per man daily is three quarts of porter; or two drams of spirits (*i. e.*, six ounces) and one quart of porter; or one dram (*i. e.*, three ounces) of spirits and two quarts of porter. The sale of spirits to soldiers is forbidden in the bazaars, yet Government licences its sale there, and the men get as much as they desire. And what is the result of all this "temperance?" Why, that at one place, which may be taken as a sample of all the other stations, one-third of disease and one-half of crime are produced, directly or indirectly, by drink. The authorities, indeed, at some stations, seem to think that the health and efficiency of the men would be improved if tea and coffee were substituted for spirits and beer; and the only plea on the other side is, that if we do not give spirits in the canteen, the men will get worse spirits in the bazaar. "Thus, the men are killed by liver disease on canteen spirits to save them from being killed by liver disease on bazaar spirits." The men themselves are far too ignorant to be trusted with their own health when anything like abstinence is demanded of them. Whatever Government allows, either in eating or drinking, the soldier cannot be expected to regard as superfluous or hurtful. For, in addition to the spirits supplied, he has far too much animal food allowed for the climate, and can eat as much more as he chooses to buy. But what besides animal indulgence can be expected when the soldier has nothing to do but eat, drink, and sleep, with the single exception of a morning and evening parade, and an occasional turn on duty? He cannot amuse himself or work, for neither library, nor skittle-court, gymnasium, workshop, garden, nor covered way is provided, and hence the man lounges on his bed in hot weather from 8 a.m. to 5 p.m., merely eating his meals, which are wretchedly cooked, as he can on his bed, or on his knees, and rushing off to the canteen as soon as it is open for his mid-day dram. Sealcote and Rangoon appear to be the only places where an approach to completeness is met with in the arrangements for the exercise and occupation of the men.

But when all this has made the men ill, and they have to enter the Hospital, one would think that at any rate now something better would be met with. But it appears that a migration from the barrack-room to the Hospital-ward is but a transference from the frying-pan into the fire. For water-closets, baths, means of personal cleanliness, nurses, good water, an appropriate site, proper bedding, sheets for the beds, covered ways for exercise, proper ward officers, and proper ventilation are all wanting. The men are crowded into wards enclosed within other wards, hot, unwholesome, damp in wet weather, and swarming with vermin. At Bangalore the water for drinking is brought from an offensive tank which receives the whole sewage of the cantonment, and from which hundreds of bullock loads of impure matter are removed year after year when the tank is low, "or the water may be brought (cholera also being brought with it) from wells into which the said tank drains." The privies are often without seats, and at Muttra their contents are carted away for combustion in one of the many brick kilns which surround the station and help to poison the air. At Madras the vile stinking river Kooum runs under the very noses of the patients. The latrines are also placed to windward "unfortunately," and tubs only are used, yet they are called "not offensive." At Baroda the Military Hospital is close to a nullah used as a necessary by the natives, and as a receptacle for the filth of the whole station. When cholera occurred, the Hospital had to be evacuated. At Trimulgherry (Secunderabad) although, as is customary, the wards are lofty, the surface area per bed is only twenty-four square feet, and the only nursing to be met with, as a rule, is a waiting-man, supplied in serious cases from the battalion, who merely mounts guard for twenty-four hours in the sick room; the duty is disliked, and the sick are neglected. When a native attendant has to wait upon the sick, things are still worse, for neither understands the language of the other. All this is bad enough, but is nothing to what is seen in the Hospitals for native troops. In all the result is an universal prevalence of Hospital disease. What else could be anticipated?

And lastly, when the men have been poisoned at the barracks or Hospitals, they are sent for cure, on the principle of *similia similibus*, to be poisoned at the hill stations, where the accommodation and arrangements are as bad, sometimes even worse. At some there is malarious fever, "others predispose to diarrhœa." At Mount Aboo the sick men are placed in "bad barracks, built in a malarious gully," and the men return suffering from intermittent fever, and from scorbutic disease, the result of want of vegetables." At one of the hill stations in the Madras Presidency, the privies are built on the edge of the hill, in order that the natural slope may save all the trouble of sewerage, and the lavatories the same, which are emptied by upsetting the tube down the hill. At another, with more than 900 men, the barrack square was one immense swamp for want of drainage.

We need not follow Miss Nightingale in her account of the condition of the native lines and native towns, where decency and cleanliness are words without a meaning, notwithstanding all these years of British possession and unlimited authority.

Such, then, is the overwhelming state of filth in which the natives of India live, and amidst which, without a finger being lifted to remedy the evil, we place the costly material of the British army. Who can wonder that out of the ignorance, prejudice, and indolence of the officials, and the delays of every governmental department, has sprung up a perennial crop of cholera, dysentery, fever, and hepatic disease? If we ask ourselves, after reading all this, what is requisite to be done, we must reply that everything has to be done which is needful to convert the savage into the civilised being, and to prevent the civilised from reverting into the savage. Hitherto the European domiciled in India has laboured to bring himself, his predilections, and his English notions of cleanliness and decency down to the level of the native practices; henceforth he must teach the native, and raise him to the European level of health and refinement. Let it not be said that this is impossible. We continually hear from Indian residents of the interference of caste prejudices with every domestic arrangement, and the same bugbear has been regarded as an obstacle to all sanitary reform. Let it be so no longer. Caste prejudices cannot stand for one moment if civilisation makes but one step in advance. It has already yielded to the incursion of railways and locomotives; it must, and will do so, too, before every other stride of European progress. At all events, the experiment must be tried. The time has arrived when the thing must and will be done. At all events, in and about our military stations the scavenger must go to work with the appliances of English decency. Proper drainage must be enforced, a constant and sufficient supply of wholesome water must be provided and brought home to European and natives by other means than the aboriginal water-skin. Barracks must be rebuilt, and where necessary removed, so as to be no longer hotbeds for disease; Hospital reform must follow. A sanitary police must be established, occupation must be found for our idle soldiery, the men must be encouraged to learn something of the language of the country where they dwell, and with this the dram-drinking in the canteen and bazaar must be abolished. Commanders must be made to understand that they will be called to account for the outbreak of disease, whenever it can be shown to have resulted from a neglect of the recommendations of the Medical staff, and the Medical men must be instructed that it is their duty to report to the commander whatever appears to them calculated to favour an unhealthy condition of the troops in their charge. We must no longer be told that "the disgustingly filthy source from which the water at Bangalore is taken has been brought to notice scores of times by the Commander-in-Chief within the last four and a-half years; but, as usual, nothing has been done to remedy this most crying evil;" that a noisome odour pervading the atmosphere is "in every respect satisfactory;" that "no improvement is required in this respect," where water has to be brought from a distance of two miles. We must no more hear it said, "we are accustomed to this in India;" or that the lack of Hospital nurses is a grievance which has been repeatedly represented, but in vain. Nor yet, in the midst of all that is horribly filthy, vile, and disgusting, that "the sanitary recommendations of the Medical officers are always attended to." Nor must we ever hear again that in an Hospital at a hill station *it took five years' writing* to remove an open privy from the corner of a verandah, which compelled the sick to evacuate the ward. If the judgment of the Medical staff be defective, get rid of every individual composing it; but whatever they advise in the interest of the health of the troops let them be responsible for, and them alone; but let their decision upon the matter be final unless overruled by superior officers of the same department, and whatever they recommend as urgent let us see in future done at once, or neglected at the peril of the commander.

But there is one topic treated of by Miss Nightingale which we have left till the last, because while we agree with her in everything else we do not entirely go with her in this. It is well known that throughout our army the married soldiers are the most steady, the most amenable to discipline, and furnish the smallest proportion of diseased men to the Hospitals. Public attention has of late also been drawn to the unsavoury discussion of syphilis in the army, and it has been held by some that a remedy for it is to be found by a more extensive licence to marry being granted to the men by their commanding officers. Now, leave to marry simply means that thereby the men have a right to quarters in barracks. It has been argued that thus taking into consideration the amazing loss which syphilis occasions to the army, a saving would actually be accomplished at the same time that the morality and healthiness of the troops would be enhanced. There is doubtless much truth in this; but we, though civilians, can see much that might be advanced on the other side. Anyhow, there must exist a very large proportion of unmarried men, and consequently, notwithstanding the provision of occupation and manly exercises, there must still exist the same tendency to fornication that exists among the similar class in civil life, and so amongst them still a large number of victims to venereal disorders. Now, Miss Nightingale complains that even with the limited proportion of married women attached to Indian regiments the State is not careful enough in providing for them during the absence of their husbands on active service in the field. We think she might have been content with pointing out this fact, and indicating and enforcing by her recommendation the natural remedy. But she is not thus content, for she goes out of her way, as we consider, to contrast this neglect of the soldiers' wives with what she considers the encouragement of prostitution by the establishment of Lock Hospitals for diseased women, and, with all the virulence of a woman taking a virtuous woman's view, rails against the contemplated provision for the seclusion and cure of those whom she considers justly styled "War Office prostitutes" and "Admiralty prostitutes." We confess we do not see how the one neglect can in any way justify the other. What we would say is, let the one be done and let not the other be left undone. In God's name, let the wives and children of England's brave men who fight England's battles be kept from cold, from hunger, and from neglect, but in God's name also let the nation's charity be extended to their erring sisters;—not with the object of rendering vice and immorality less dangerous to the soldier—who probably never troubles his head about the consequences when his passions are in the ascendant—but on the principle that disease is to be combatted by all the means that the Almighty has placed in our hands for mitigating the evils that exist in the world, leaving it to Him to strike the balance between good and evil, in accordance with that perfection of justice, tempered with mercy, that we can neither imitate nor comprehend.

Hæmostatic for Leech Bites, etc.—Perchloride of iron dissolved in collodion, one part of the former to six of the latter. The perchloride should be added gradually and with care, otherwise such a quantity of heat will be generated as to cause the collodion to boil. The composition, when well made, is of a yellowish red, perfectly limpid, and produces on the skin a yellow pellicle, which retains great elasticity.

THE WEEK.

A CONTRAST.

By the Report of the Council of Military Education we learn that when an examination was held upon July 2 last for admission into the Royal Military Academy, Woolwich, for 34 *vacancies* 138 *candidates* presented themselves, 70 *of whom were qualified in every respect*, and the names of the 34 highest upon the list were submitted to H.R.H. the Field Marshal Commanding-in-Chief. At the last Army Medical examination for the supply of *nearly* 100 *vacancies*, 48 young Medical men present themselves for examination, and only 33 are found qualified in every respect. These facts speak for themselves! Should no changes be made by the authorities, we venture to predict that the Veterinary Surgeons will be the sole representatives of a Medical element in the army; and perhaps the duty of "directing" their Hospital serjeants in the branding of soldiers may be found to be more in accordance with the spirit and practice of their profession than ours.

SOCIETY FOR ABOLISHING INFANTICIDE.

We learn that a new society is to be established for the purpose of preventing infanticide. Some good, doubtless, will result, and the first that may be hoped for is the enlightenment of the supporters of the embryo society, who evidently have a great deal yet to learn.. The killing an infant is but the last link in a chain of error, the first of which is the breach of the seventh commandment; and if the supporters of the society will calmly investigate and honestly lay bare the facts which may be ascertained relative to the amount and causes of unchastity in private life, they will be taking the best preliminary steps to the end desired. They will probably learn that the chief cause of infanticide is shame. It is not the loose women of the town who have illegitimate children, or who, if they have, destroy them by violent means; it is the unfortunate young girls in respectable situations, who are left, by the carelessness of their parents or employers, within reach of temptation, and who destroy their newly-born infants in the vain hope of concealing their disgrace. It is not a Foundling Hospital that is needed. That, indeed, would soon be filled with the infants of the poor and reckless; but it is some means of inducing young women to set a higher value on their own honour, or of confiding their griefs to some charitable bosom, should they unluckily have been victims to the old serpent.

MARKS OF VIOLENCE IN THE DROWNED.

The evidence given in the recent investigation in the case of a bank clerk who was missed on the 3rd inst., and whose body was found a week afterwards in the Thames, near St. Katherine's Dock, is not devoid of Medico-legal interest. It appears that about twelve o'clock on the night of the 3rd, the deceased left a tavern at the north end of London-bridge, where he had been drinking champagne with some friends, to catch a train which started at 12.15 from the London-bridge terminus. According to the evidence, he was a little excited by drink, but quite capable of taking care of himself. He had a stick with him, and some money. He was not again seen alive. When found his dress was not at all disarranged, there were no buttons unfastened; several articles were found in his pocket, but no money. The body was discovered floating with the back upwards, and the head a little out of the water. The friends of deceased entertained a strong opinion that he had been unfairly used, and urged in support of their view the fact, that, although both eyes were swollen and discoloured, one eye was much blacker than the other. The absence of the money was also suspicious. At the time of the deceased's disappearance the tide was nearly at the lowest, and there is only one part of the river side—near the Adelaide Tavern below London-bridge—where the water would have been deep enough to have immersed him. On the steps by which this deep water is reached is a place of convenience, but supposing the deceased to have rolled down the steps in a state of insensibility, it might have been expected that marks of severe injury would have been discovered on the body. The post-mortem examination was referred by the Coroner to Dr. James Edmunds. He deposed:—

"I found the body very much discoloured and bloated, so much so, that the features and face were unrecognisable. The skin was mottled with a black and greenish colour—darkest in the face and about the upper parts of the arms. The body was very offensive. There were special marks upon it—one on each knee, and another on the left arm, just above the elbow, and the eyes were very black and swollen. I removed the scalp, and examined the under surface of it most carefully, as also the exterior of the skull. I could discover nothing which proved that any violence had been inflicted before death, but I ought to say that decomposition was so far advanced that I can only speak negatively on this point. I opened the skull, and found the brain dark and soft —dark from congestion, and soft from decomposition. There was not a trace of injury about the skull or the membranes of the brain, such as would have been produced by a severe blow on the head. On opening the chest, I found the heart gorged on the right side with black, jelly-like blood, and quite empty on the left. The lungs were densely congested, and there was a large quantity of bloody fluid around them and the heart—about two pints. I examined the throat very carefully for marks of pressure or strangulation about the air-tubes, but there was no trace of violence. The larynx was uninjured. It was full of slimy mud, which extended into the smaller air-tubes. I then opened the abdomen, and found the stomach and intestines much congested. The stomach contained about a small wine-glassfull of wine, which I thought was champagne, and the remains of a meal partly digested; pulpy matter like cheese, some currants and vegetable matter, like pieces of gherkin and apples. The duodenum was quite empty. The bladder was empty. All the other viscera were healthy. From my examination of the under surface of the skin of the head, which was made very anxiously, I am unable to say that any injury was inflicted on him before death; and this in consequence of the extent of discoloration."

Dr. Edmunds drew the following deductions from the facts:

"1. From the condition of the respiratory and circulatory apparatus, that death was caused by suffocation.

"2. From the uninjured state of the neck and air-passages, together with the presence of mud in the air-tubes, that suffocation was caused by drowning.

"3. From the contents of the stomach, that his last meal was probably that which his friends had witnessed.

"4. From the stage of digestion, and the emptiness of the duodenum, that death had probably occurred within one, or at most two hours after this meal.

"5. From the mud lining the air-tubes, the absence of mud or water in the stomach, and the unscratched state of the finger ends, that he struggled but little, and was probably more or less insensible when drowned.

"6. That there was no evidence of homicidal violence on the body.

"In answer to a question put by the brother of deceased, Dr. Edmunds said that the closing of the eyes was simply from gaseous distension caused by decomposition. The eyes always close when decomposition has distended the skin, just as those of a prizefighter are closed by blows, the closing being merely a mechanical operation from swelling. The brain had certainly received no violent concussion. A juryman asked if he could account for the face decomposing more rapidly than any other part of the body? Would a blow previous to death accelerate decomposition? Witness replied that it would, but irrespective of that it was a fact that in general the face of a dead person did decompose more rapidly than any other part of the body. The juryman said he had thought it right to put the question, because the face of the deceased was so very much more decomposed than any other part of the body. It was, in fact, one mass of decomposition. Witness said that that might partly arise from the face being much more exposed than any other part of the body. The hands were perfectly fresh, and so were the feet on the boots being removed. Mr. Alfred Morris (the deceased's brother) remarked that he and one of his brothers were the first of his family who saw the body, and that, although there was some decomposition about the head and face, it was very much worse over one eye and in the sockets of both eyes, as if the deceased had been violently struck in the eye previous to his immersion. Dr. Edmunds said the skin over the eyelids is exceedingly thin, and the air would always decompose the subjacent tissues more rapidly than any other part of the body. One eye of the deceased was swollen much more than the other, but that might be accounted for by his falling on some hard substance, or by unequal exposure to the air. It was impossible to come to a safe conclusion under the circumstances. The jury returned an open verdict,—"That deceased was drowned in the river Thames, but how he came there, and under what circumstances, there was no evidence to show."

BRITTLE RIBS.

DRUNKEN women are not unknown in sober England, and unless Fame be a very great liar indeed, they are still less unknown in moral Scotland. But although we have heard much from the Physicians and philosophers of that moral country about the "anatomy of drunkenness," the physiology and pathology, and the reformation of drinkers, we never before heard that the continued imbibition of whisky confers such extraordinary fragility as seems to have been established to the satisfaction of a Dundee jury in the case of one Grant. This worthy man is described in the *Dundee Advertiser* as

"A man who has found in the hour of his trouble the benefit of a high character, and the value of that obliging disposition for which he was known. A man of genial mould —sociable, kindly, convivial, wishful to please—he made many friends by that promptness to do little favours, which was one of his chief characteristics. A good father, a long-suffering husband, a respectable neighbour, a faithful and respected servant, and a most conciliatory and likeable man, he has found in the day of his distress how warm a sympathy may be evoked by qualities like his."

The Rev. Dr. M'Gavin testifies also to the exemplary regularity of his attendance at church. Well, this worthy man came home on the night of June 20 last, and found his wife drunk, as was her habit. But he was also in liquor himself, though, as he says, he knew what he was about. Finding his wife drunk, and "knocking about in a helpless state, he told her to go to bed." The words following are his own:—

"Seeing my wife was helpless, I told her to go to bed. As she did not do so, after some time I proceeded to take her into the bed-room. While carrying her, in passing through the room, she came in contact with the foot of a table at the wall which caused her to fall, and I fell along with her upon the other table in the middle of the room, which gave way under the weight. I fell on the top of her. I did not then think she was injured. I pulled her along into the doorway between the two rooms, and left her there to sleep off the effects of the drink, as I found I was unable to get her into bed. Her being left in that position was a thing that had often occurred before. I went in to clean my shoes for next day, and some of the blacking was spilt over my wife. I hoped that, seeing the state she was in when she awoke, she might be induced to attend to herself better in future. I then went to bed with my children. I think it would then be about eleven o'clock. I fell asleep, and was awoke about one o'clock in the morning by the youngest child crying. I got up, and gave it some milk and bread, and saw my wife then, still lying where I had left her. I did not go near her, but went back with the child to bed. I was again awoke by the child about four, when I called to my wife, thinking she would then be sober and come to bed. She made no reply. I went to see what was the matter. I found her hand quite cold, got alarmed, and went immediately for assistance."

Alas, the moral lesson and accidental tumble which this long-suffering husband gave his wife, produced (no doubt owing to some unprecedented fragility as aforesaid,) the following list of injuries, sworn to by Dr. Cowper, of Dundee; to wit:—

"Extensive and severe bruises of a dark livid and blue colour over the temples and eyebrows. These bruises had been recently inflicted. The nose was bloody, the blood being dry. An extensive bruise, giving rise to ecchymosis (the centre of which was grazed) was situated on the chin on its lower aspect, and to the right side. Both elbows and fore-arms were marked with numerous ecchymosed spots or discolorations. The ring finger of the left hand had a scratched wound upon its ulnar aspect, as if it had been torn by a pin or nail. There was a discoloured mark over the left clavicle, and on the left breast near the nipple. The chest was free from bruises and discolorations, but was somewhat indented in the centre, as if the fore part of the chest had been pressed inwards. The abdomen had a blackened appearance, which extended over the pudenda and the thighs—all of which looked as if a coarse wet cloth or brush covered with blacking had been drawn over the parts. There was a severe bruise over the mons veneris. A superficial lacerated wound, half an inch in length, existed on the internal and upper aspect of right labium of vagina. Numerous blue and livid marks, mostly of recent infliction, were situated on both thighs and legs, especially on the outer aspect of left leg, and on the anterior aspect of right leg.

"On the left side, the first, second, third, fourth, fifth, and sixth ribs were found fractured nearly about half-an-inch from the junction of the bony part of the rib with its cartilage. The cartilage of the seventh rib was broken near its junction with the bone; the eighth rib near its junction with the cartilage; and the cartilage of the ninth rib near the bone. On further dissection, each of the second, third, fourth, and fifth ribs were discovered to be fractured a second time, from three to six inches from the sites of the fractures mentioned above.

"On the right side, the second, third, fourth, fifth, and sixth ribs were found fractured—the second, fourth, and fifth ribs twice fractured—and the third rib three times—all through the bony parts of the ribs, excepting the second, which was through the cartilage.

"The sternum was twice fractured, the first break being about two inches from the top of the sternum, and the second again from two to three inches beneath the first. There was no displacement of the fractured ends of the sternum.

"The pleuræ on both sides were penetrated by the fractured ends of the fifth rib on the left and the third rib on the right side.

"On opening into the cavity of the abdomen, a great quantity of liquid blood was found effused. The right lobe of the liver was ruptured quite through, from before backwards, and two transverse fissures of small extent ran from this great rupture into the right half of the liver.

"On reflecting back the scalp, extensive effusion of blood was found beneath it, corresponding to the external marks over the eyebrows and temples. Both temporal muscles were black with extravasated blood."

Of course there was Surgical evidence for the defence—Surgeons who swore that they "had paid special attention to fractures," swore that all these twenty-four fractures, these wounds, and ecchymoses, and ruptured liver, and use of the blacking-brush, were produced by the weight of the deceased herself and of her husband falling on a table—proving the existence of a new kind of *fragilitas ossium* to enrich the Surgical archives of moral Scotia. What a pity that there is no such verdict recognised as *served her right*, applicable to cases of tipsy wives who fall whilst their tipsy husbands are carrying them to bed! The Dundee jurymen, however, may have had a keen eye to domestic possibilities, and Dundee wives must take a lesson and not get tipsy for the future.

CIVIL HONOURS TO MEDICAL MEN.—His Excellency, the Lieutenant-Governor, has been pleased to appoint the Honourable Robert Hamilton, M.D., to be Keeper of the Rolls and Records of the Peace of the parish of St. Andrew.—*Jamaica Gazette*, August 13, 1863.

CATTLE INOCULATION.—For the prevention of the contagious typhus amongst cattle, inoculation with the saliva of an affected animal has been recommended in a communication to the School of Medicine at Berlin by a grazier of Pomerania.

THE MEETING OF THE BRITISH ASSOCIATION AT NEWCASTLE.

(THIRD NOTICE.)

(From our Special Correspondent.

B. W. RICHARDSON, M.A., M.D. LONDON,

On Iodine as a Deodoriser and Disinfectant.

Dr. RICHARDSON made a short observation in sub-Section D on Thursday, August 27, "On the Application of Iodine for Disinfecting and Deodorising Purposes." The iodine should be placed in a common chip-box, such as is employed by pharmaceutists, the lid of the box being replaced by a covering of "leno," or the iodine may be placed in the ornamental vases on the mantle-shelf of a room. The smell of iodine could thus be communicated to the air of an apartment, and air so purified was not only fresh and agreeable to the sense of smell, but any organic matters present in it were destroyed. In extreme cases the iodine should be placed on a dish or plate, and the heat of a candle being applied beneath, the iodine was volatilised, and a room was quickly purified. Dr. Richardson said that in cases of small-pox a knowledge of the facts he had named was most valuable. In rooms occupied by sufferers from this painful disease, organic matters floated largely in the air, rendering the air most offensive. He (Dr. Richardson) had succeeded, in all cases, in rendering such air inodorous by the volatilisation of iodine. He had also observed the singular fact, that when the air was greatly charged with organic materials, the smell of the iodine was for a long time imperceptible, so that in truth the iodine method of purification was also a ready and practical test of the purity of an air. Dr. Richardson thought the iodine plan was quite as effective as the liberation of free ozone,—it was, indeed, in principle the same, and was so simple that every person could employ it.

Dr. Wood said that the iodine produced the effects named by Dr. Richardson in one of two ways,—it either destroyed the organic compounds by combining with hydrogen, and forming hydriodic acid, or it might be that in the chemical changes that occurred ozone was formed. In either case there was unquestionably a rapid and effective process of oxidation, the results being the same as occurred with chlorine to a considerable extent, and in a manner more easy and manageable.

On the Physiological Properties of the Nitrite of Amyle.

This paper was read by the author on Friday, August 28, in sub-Section D. He first described the mode of manufacture and the chemical properties of the nitrite, and then passed on to the physiological action. The first remarkable fact was that the nitrite when inhaled produced an immediate action on the heart, increasing the action of the organ more powerfully than any other known agent. As the action of the heart rises, the surface of the skin becomes red, and the face assumes a bright crimson colour. A little of the nitrite was here placed on a piece of bibulous paper, and passed round to show the effect on the face, and the effect was most remarkable, causing the faces of the persons who smelt the vapour to become instantaneously flushed. Carried to an excessive degree, the nitrite excites the breathing, and produces a breathlessness like that caused by sharp running or rowing. On animals, when the agent is given in large quantities, death is produced. The author at first thought that the nitrite, like chloroform, would cause anæsthesia; but experiments had shown that this view was not borne out. Animals would, it is true, lose consciousness; but when such a stage was reached, great dangers resulted, owing to the slowness by which the poison was removed from the body after its absorption. On the blood the nitrite produces darkness of colour, but it does not materially interfere with coagulation in the body. In the lungs it excites congestion, and in the brain slight congestion. It causes no severe spasm and no sickness. After entering into certain other details, Dr. Richardson proceeded to say that the most remarkable effect produced by the nitrite was that in the lower animals—frogs, for instance—it led to suspended animation, which could be maintained for so long as nine days with perfect after recovery. This fact was of curious historical interest. The ancients, especially Theophrastus (Paracelsus), had stated that there was a poison which, when taken one day, would not take effect until some future day. This statement, long considered as a myth, had within the present year been shown to be true by Dr. Letheby, who had discovered a poison which really produced this phenomenon. In like manner the ancients had an idea that there were medicines which would for a time suspend life. The proceeding of Friar Lawrence in giving the distilled liquor to Juliet, was based on this old fiction, or shall we not say fact? The next point discussed by Dr. Richardson had reference to the mode of action of this poison. Were the effects produced through the blood, or by the nerves direct? The speaker said that he had been led to the conclusion, from previous experiments, that all poisons were brought into action through the blood; but this very commonly accepted theory did not explain the immediate and powerful action which follows the exhibition of the minutest dose of the nitrite amyle. He thought, therefore, that the action, was immediately on the nervous system, and that such action, transferred to the filaments of nerves surrounding the arteries, paralysed the vaso nerves, on which, the heart immediately injected the vessels, causing the peculiar redness of the skin and the other phenomena that had been narrated. Dr. Richardson, in conclusion, said that nitrite of amyle, like to chloroform twenty years ago, was only to be considered as a physiological curiosity. It might by its action suggest the cause of trance, and of what was called hysterical unconsciousness, and it might explain the mode by which certain analogous substances produced their effects on the organism. It had been suggested—naturally suggested—that in fainting, as from loss of blood or from fear, the inhalation of the nitrite of amyle might be of service. He (the author) did not, however, at the present moment recommend its use in medicine, because of the intensity of its action. This last point was at the present time under his inquiry, and he would report further results at the next meeting of the Association.

A Miner's Safety Mask.

Dr. Richardson gave this paper on Monday, August 31. He said that the idea occurred to him that it would be possible to construct a mask which the miner or other workman could wear while exposed to carburetted hydrogen and other poisonous gases in mines, for the same purpose of protection as the miner uses the safety lamp. He added, that he was sure as to the possibility of carrying out the invention to its perfection. His researches have been conducted in three directions—First, to construct a mask that shall give oxygen to the workman in case of necessity; second, to construct a mask that shall render the ordinary oxygen more active and meet the effects of the poison; third, to construct a mask that shall separate the poisonous gas from the air. The author then laid before the Section various details. As regards the first projected plan, he was not, he said, very sanguine, for as yet there is no substance which will yield sufficient oxygen at the temperature of the breath to enable a mask to be constructed that would be portable and of immediate application. The second method is the one that promises the most important results. In this principle a mask is contrived having a double valve action like a Snow's inhaler for chloroform; the air in this case, as it enters the lungs, is made to pass over bodies which have the effect of ozonising it, of rendering the oxygen more active, and of decomposing to a limited extent the dangerous products. Up to this time he has found iodine most effective as the chemical substance for rendering the air more active. Iodine can be used with the double valved mask in a most simple manner; by attaching a small box containing perforated plates to the inhaler beneath the valve for the entrance of the air, and by placing the iodine on these surfaces a little chamber is made (which may be opened and closed at pleasure, and through which the air may be drawn. A mask of this nature may be constructed to last for months or even years. The author has inhaled through a mask so constructed, and has performed some experiments which show that in small animals life can be prolonged for a period of three minutes beyond the time when the other animals die in the same gas without the interposition of iodine. He did not consider this result sufficiently important to lay much stress upon it, although a life might perhaps sometimes be saved even by so small a gain of time; but he wished to get a mask that would allow the air to be used for half an hour or an hour. Respecting the third plan, he said that it would be most efficient if it could be carried, and the late researches of Professor Graham promised, he believed, to be of service; he meant those researches which had reference to the separation of gases. The desideratum was, to construct a mask that would not readily wear out, that would act at any moment, and that could be applied as easily as the mask used by a person at a masked ball. In conclusion, the author expressed that he had brought this subject forward for two reasons—first, to record what he had done; and secondly, to point out the lines of work for other labourers. He did not know that he should be so fortunate as to complete a miner's safety mask, but he was confident that the invention once put in hand, before the next meeting at Newcastle will be an accomplished fact.

George Robinson, M.D., London,

On the Nature and Varieties of Organic Effluvia.

Dr. Robinson's paper, above-named, was read by Mr. Samuelson, in sub-Section D, on Monday, August 31. It ran as follows:—Were any proof wanting of the intimate and necessary connexion between natural philosophy, chemistry, and natural history on the one hand, and physiology and pathology on the other, it would be supplied by the gradual progress of our knowledge of the abnormal constituents of the atmosphere. As the natural sciences have advanced, many of those noxious influences which were formerly ascribed to supernatural causes, or to the scarcely less mysterious agencies of stars, comets, and volcanoes, have, even in the present imperfect state of Medical science, been traced to the operation of the ordinary laws of nature; and there is strong reason to hope and believe that with the advance of science the composition and relations of many of those subtle aëreal poisons which sometimes periodically, sometimes permanently, desolate various regions of the earth, will be ascertained, and their injurious effects at least in some degree mitigated or prevented. But for this great object to be even partially attained, the cultivators of the natural sciences must be brought into closer relation with physiologists and pathologists; they must, even for the advancement of their own favourite departments of knowledge, be willing both to receive and impart instruction, and so co-operate in the work of elucidating the laws of life with those men whose special duties compel them to observe, as closely as human powers extend, the structure and functions of the highest of all animal organisations. Even now the necessity for further advances in the application of natural philosophy and chemistry to the explanation of the phenomena of life is painfully felt by every student of the healthy and diseased actions of the human body; and there are hosts of questions, all bearing most powerfully and directly on the health and happiness of mankind, which can only be solved by continued progress in the direction indicated. I make these preliminary remarks in no depreciatory spirit, and with a full sense of the enormous advances recently made in the development of the physical sciences, but I do feel that the highest and noblest, and most useful study that can engage the human intellect—the study of man himself—has not in this country received a proper share of attention, while I am at the same time convinced that its cultivation would in turn accelerate the progress of general science. A very little reflection will suffice to demonstrate that, under the general term "organic effluvia," several entirely distinct substances have been confounded, and as it is impossible to entertain any clear ideas of their action as causes of disease, without greater precision in this respect, I am induced to direct attention to the subject. The importance of a clearer classification will be manifest when we consider that our arguments and inquiries respecting epidemic diseases must be materially influenced by the views prevalent as to the composition, properties, and affinities of those peculiar matters present in the atmosphere which form the basis of such pathological and hygienic researches. In the present state of our knowledge, I am inclined to think that all those abnormal constituents of the atmosphere which are recognised under the general term "organic effluvia," may be resolved into four principal groups, viz., 1. Gases and the vapours of volatile chemical compounds formed during the decomposition of organic matter; 2. Odoriferous particles *sui generis*; 3. Volatile organic matters not endowed with vitality; 4. Living germs. 1. In the first group I would place not only the linary gaseous compounds evolved, for instance, during putrefaction, such as the compounds of hydrogen with sulphur, phosphorus, carbon, etc., but also ammonia and its curious combinations with sulphur and phosphorus, described by Dr. Crace Calvert as formed during the decomposition of animal matter. 2. The natural philosophy of odours is so little known that no excuse need be offered for placing in a separate group the volatile particles capable of being detected by the sense of smell, but not demonstrably related to any known gases or vapours. 3. The third class of organic effluvia is one to which I attach great importance, from the belief that not only are those volatile organic matters often, perhaps generally, poisonous in themselves, but that they are also injurious to an incalculable extent, by sheltering, nourishing, and so propagating the noxious germs, liable at all times to be suspended in the atmosphere. And if it can be demonstrated that volatile organic matter is present, under certain circumstances in the air surrounding us, there is no more difficulty in believing it capable of nourishing and contributing to the growth and development of contiguous germs than in supposing the animalcules present in water to derive their chief support from the animal and vegetable matters dissolved or suspended in it. That organic matter is present in the atmosphere might at once be inferred from the varied odours proceeding from plants and animals, and from the injurious effects exercised on living animals by exposure for a length of time to accumulations of such effluvia. But modern chemistry has converted this probability into a certainty. Zimmerman has described, under the name of "pyrrhine," volatile orgsnic matter universally present in rain and snow-water. And more recently Dr. Angus Smith has even determined the relative quantity of the organic constituents of the atmosphere present under different circumstances. This point may therefore be considered as definitely settled. 4. The existence of living germs in the atmosphere is proved by the phenomena of what has been erroneously called "Equivocal Generation," such as the appearance of fungi on animal and vegetable substances secluded from everything but the atmosphere, air, etc. The possible dependence of epidemic diseases on the entrance into the blood circulating within the human body of some varieties of these organic germs is favoured by many analogies and by some direct evidence. For instance, Dr. Robert Dundas Thomson, who examined the air contained in the cholera wards of St. Thomas's Hospital during the epidemic of 1864, states "that in the atmosphere of a cholera ward mechanical matters were diffused throughout the air derived from the inmates, that sporules of fungi, and germs of vibriones, or vibriones themselves, were obtained by filtration from the atmosphere." In leaving this subject for the present, it may be well to observe that whatever classification of these volatile invisible particles emanating from living or dead animal and vegetable matter may eventually be adopted, they are doubtless so mixed together as to render their separation in any definite quantity of air very difficult, if at all practicable. For instance, in the effluvia proceeding from a case of small-pox it could be demonstrated that all the above-described varieties are present. And in fact there is every reason to believe that the atmosphere is even more compound than the ocean, containing innumerable substances dissolved or suspended in it, and being constantly affected by, and reacting on, the mass of living organisms with which it is brought in contact.

For the purpose of ascertaining whether living germs injurious to health are present in the sick wards of Hospitals in unusual quantities, Mr. Samuelson recommended that a sheet of cotton wool should be purchased from the maker, carefully protected until required, and then stretched across a small hoop, and suspended over the patient's head. The cotton should, after a time, be removed, a part dissolved in ether, and a part washed in distilled water. The distilled water, it had been suggested, should be previously passed through a heated platinum tube. Mr. Samuelson begged that if any results were obtained from this experiment a little of the cotton charged with germs might be sent to him for examination.

Dr. Smith thought it could not be denied that there were germs of life in the atmosphere, but the fact had been and still was very difficult to ascertain; and what was wanted was not speculation and opinion, but the actual detection of those germs. He did not believe that cholera was produced by their means; that opinion had been disproved.

On the Practicability of Arresting the Development of Epidemic Diseases by the Use of Anti-zymotic Agents.

This paper of Dr. Robinson's was delivered also in sub-Section D, on Tuesday, September 1. The author commenced by referring to the circumstance of the analogy between many of the phenomena of fevers and other zymotic diseases, and the ordinary process of fermentation having been perceived and recognised by Hippocrates and the oldest writers on medicine. Their idea was, that a poisonous ferment, existing in the atmosphere, entered the mass of blood, and induced in it a series of changes, which gave rise to the excessive heat, and other peculiarities of that class of diseases,—at the present time, this doctrine, modified by the discoveries of Liebig and other chemists, has been adopted by most Physicians, and forms the basis of the classification of disease framed by Dr. Fan, and used by the Registrar-General. It thus supposes living germs to exist in the atmosphere, which, when introduced into the body, give rise to a specific and regular series of morbid actions, pursuing in definite course in a definite time, as in smallpox—those germs being disclosed and multiplied, and producing others capable of reproducing in other bodies the same succession of changes—other lethologists have supposed that the atmospheric poison acts on the blood chemically, by giving rise to what may be termed catalytic actions—while the author is disposed to believe, from what he saw during the cholera epidemic in Newcastle in 1853, that some of these volatile organic matters in the atmosphere are capable of acting on the human body as direct poisons, and that this inanimate volatile poisonous matter also furnishes nutrition to the organic germs suspended in the air. After these preliminary remarks, he proceeded to refer briefly to a number of scattered facts, which seemed to him to indicate the existence of a great principle, which might hereafter be found applicable to the prevention or mitigation of epidemic diseases, by the direct use of substances capable of arresting the process of morbific fermentation. He mentioned the following facts as converging to this conclusion:—1. Antiseptic substances, ranging from simple innocuous matters, such as sugar, up to the powerful metallic poisons, such as corrosive sublimate, and forming a very numerous and diversified group, have been long known to be capable of arresting the putrefaction of animal and vegetable structures. 2. The same substances prevent the formation of fungi, as is seen in the use of solutions of metallic salts in the taxidermy in the prevention of dry rot, &c. 3. Many of those agents are also known to arrest at once the process of fermentation, as, for instance, sulphurous acid, and Emi and other chemists have observed under the microscope the rapid stoppage of the vitality of the yeast plant when a solution of arsenious acid was added to the fermenting liquor. 4. The formation of the fungus in and on the plant, which causes the vine disease, is prevented by applying sulphur to the affected vines. 5. In Cornwall it is believed that the arsenical fumes from the tin-calcining furnaces exercised an influence over the potato plants in the neighbourhood, which preserved them from the disease then affecting other parts of the same county. [A statement to this effect, signed by Captain Charles Thomas, sen., of Dolwath, and sixteen cottagers, was here read.] 6. It has been found that when a species of fermentation has taken place in the human stomach, resulting in the development in large quantities of a minute organism (the sarcina ventriculi), this morbid action can be controlled and stopped by the direct anti-zymotic influence of certain salts, such as sulphate of soda, in doses perfectly compatible with the patient's safety. 7. In different parts of the world, among different races, a belief has long existed that certain antiseptic substances, of which arsenic may be taken as the type, are capable of acting as antidotes or preservative and curative agencies against atmospheric and other poisons, and in some cases that popular belief has proved to be well-founded. The experience of the multitude discovered the value of arsenic as a cure for ague long before it was recognised as such by Physicians. The arsenical fumes of certain works in Cornwall were stated by the late Dr. Paris to have stopped the ague, previously endemic there. More recently it has been stated that the arsenic eaters of Styria are peculiarly exempt from fevers and other epidemic diseases. And in India the natives have long used arsenic as an antidote to the poison of snakes. Dr. Robinson concluded by expressing a belief that these scattered observations were not only sufficient to justify and necessitate further inquiries in this direction, but seemed in themselves to shadow forth the outline of a great law which might at some future time be productive of immense benefit to mankind.

After the paper was read, the Rev. J. E. Elden, a gentleman present, stated that some of the Medical men of Birmingham "attributed the remarkable freedom of that town from cholera to the minute presence of arsenious acid in the atmosphere of that district, derived from the metal works."

Professor G. Rolleston, M.D., F.R.S., Oxford.

On the Renal Organ of the Aplysia.

The paper, the title of which is given above, was read by the author on Saturday, August 29. Dr. Rolleston did not furnish an abstract.

On the Condition of the Uterus after Parturition in the Different Orders of Mammalia.

The author gave descriptions of the uteri of the common rat, of the Madagascar animal, the tenrec, and of the human subject, in each case giving the appearances seen immediately after, or at the period of parturition. He described also, and figured the uterine walls and the fœtal membranes of a pig-tailed monkey which had died a short time after parturition. Special reference was made to Dr. Matthew Duncan's paper in the last volume of the *Obstetrical Society's Transactions*, and to M. Robin's paper in the *Mémoires de l'Académie Impériale de Médecine de Paris*. These authors had shown that one part, and that much the larger part of the so-called "decidua serotina" was not really deciduous at all, and M. Cazeau, "Traité des Accouchements," p. 500, had stated it as his belief that the non-deciduous serotina was often mistaken in practice for a morbidly adherent placenta. In theory it had often been mistaken for a mass of denuded muscular coat, being made up of smooth and glistening superposed strata of membrane, which it was necessary to compare with the true muscular coat under the microscope to be sure they were really but modified mucous membrane. The non-deciduous serotina formed in the rat, not, as in the human subject, an elevated area, but a hernial protrusion out of the uterine cavity, and into the mesometrium. This had been mistaken in the rat for a developing ovum, its true character having been overlooked. M. Robin's phrase in describing the way in which the utero-placental area and the laminæ of non-deciduous serotina were restored to the condition of the rest of the uterine mucous surface, "le tissu de la muqueuse s'est régénérée *au devant* d'eux," was shown to apply to the process of restoration in the homologous area and tissues in several of the lower animals, and, indeed, it was suggested the process of reparation of extensive superficial wounds bore a considerable resemblance to the more purely physiological phenomenon under consideration. M. Coste's plate, i. a., fig. 3, showed for what a long period the utero-placental area might retain characters more or less different from those of the rest of the mucous membrane of the cavity. In this point the Rodent and Insectivore contrasted forcibly with the human subject. The non-deciduous serotina it was not easy to separate away always, at least so as to form a large sheet from the afterbirth in the human subject. In the monkey it was more coherent and consistent, It is to be seen figured in M. Breschet's paper *Mémoires de l'Institut*, xix., which is less known than it ought to be. In the lower Mammalian orders Insectivora, Rodentia, and Carnivora, the deciduous serotina was thicker, more pulpy, and less condensed than the homologous structure in the Quadrumana and in the human subject. The Cetacea, the Pachydermata resembling them in so many points, and the Ruminants had no decidua serotina. This structure was saucer-shaped in the rat, and might be found in the stomach of the mother rat after parturition, together with the afterbirth, which these animals, as well as many others below the apes, devoured. It was bilobed, but the two lobes were centrally continuous, though constricted, in the rabbit; the decidua serotina clamping the afterbirth together. The same was the case with the hare, but the two lobes of the afterbirth itself were connected by a slender isthmus of their own tissue as well as by the decidua serotina. The decidua was but a thin wafer in the tenrec near full time; in a hedgehog at an early period it was tumbler-shaped, the bottom of the tumbler being supposed to be convex, and the rim to converge somewhat.

SULPHATE OF SEWAGE.—Mr. Henry Bird, of Cheltenham, has lately addressed several letters to the *Cheltenham Free Press* on his mode of deodorising and precipitating sewage by the addition of the sulphate of iron and alum and sulphuric acid. He finds that the sulphates of metals and earths have powerful precipitant and deodorising properties. In virtue of the latter he recommends the substitution of sulphate of zinc for the chloride as a disinfectant, on the ground that the sulphate if swallowed accidentally would, owing to its emetic action, be less likely to produce fatal consequences. The addition of sulphuric acid to sewage produces the evolution of carbonic acid and sulphuretted hydrogen gases, after the escape of which the smell is much lessened.

FOREIGN AND PROVINCIAL CORRESPONDENCE.

AMERICA.

IN CAMP NORTH OF THE RAPPAHANNOCK, VA.
August 27.

MY last communication to you was written on the evening previous to the departure of the operative Surgeons from the Gettysburg Hospitals to rejoin their commands. The work they had been left to perform was accomplished, and they, however unwilling to lose sight of the cases over which they had for so long watched, had to leave, as rumour spoke of impending battles between the opposing forces, and as in such case their services would be of infinitely more value near the scene of strife than on the then comparatively deserted field of Gettysburg. The wounded they left behind them in the care of contract Surgeons were capital operations, and severe cases, such as were as yet unable to undertake without great risk the fatigues of travelling, and those in whose cases the prognosis was regarded as unfavourable; their number, however, was lessening rapidly; one or two hundred of the former class were daily despatched to the railway-station, and every morning saw a few of the latter, each enveloped in his blanket, deposited in a neighbouring field. During the first fortnight after the battle the weather was remarkably cool, on account of the continued rains, but after this two or three days of intense heat developed so fœtid, so sickly an atmosphere around these Hospitals, that it became necessary to shift ground in order to avert the occurrence of fever and diarrhœa.

Well! the wounded did suffer severely after that battle, more so than after any of the previous actions of the war. To look back upon those scenes in calmness, now that the excitement of marching, of expected battle, of actual conflict and its consequences has passed away, one wonders that wounded men could have survived the exposures and sufferings of the six days immediately succeeding the fight. Many of those with flesh wounds have now returned to their regiments for duty, and, as reclining in the shade they tell their more fortunate comrades the story of their Hospital experiences, they shake their heads and smile, and say "Well, those *were* hard times." They were indeed.

Since then we have had no general engagement, but our energies have been exhausted by heavy marching and arduous picket duty in the hot sun, and by the feverish anxiety to which the continual expectation of a battle gives rise. The rocky defiles and eastern slopes of the Blue Ridge Mountains put the finishing stroke to us, so that it became a military necessity, as it already was a Medical one, for the men to have rest to recruit their physical powers. After leaving the mountain passes, the proportion of men requiring transportation in the ambulances increased to a great extent. Many fell behind the column, and were, I have no doubt, picked up by the guerillas that hovered in our rear, while others fell down in the line of march exhausted, or from the effects of the sun, and died. The Army could not march much longer and be effective in case of a struggle with the enemy. Representations were made by the Medical officers. Official answers were returned to a series of questions such as: "What number of men in your command rode in ambulance yesterday? How many men died from exhaustion on yesterday's march? How many from sunstroke? How many days do you think it necessary for the troops to rest in order to render them capable of performing efficient service in the event of an engagement?" and so on.

In the commencement of August active operations were for a time suspended, and the Army went into summer quarters, much to the satisfaction, I presume, of every one in it; for campaigning in such weather as we now experience is enough to perspire patriotism out of the most patriotic. Our summer camp is a very comfortable and healthy arrangement; plenty of room is allowed to each command—one grand point in a sanitary view of the matter, for hence the streets are wide, the tents well separated, and the stables and latrines are permitted to be at a wholesome number of yards from where the men pass their hours. The foot of each tent is raised at least a foot and a-half from the ground, so that whatever breath of air there may be may permeate every nook and secret corner of the camp. The men have built bedsteads for themselves at a height of twelve inches or more from the surface of the ground, that the damp dews which occasionally fall at night, or the rain storm may not sow in them the germs of disease. To shelter them from the solar rays a vast parasol is thrown over their heads; a large number of forked stakes, twelve or fourteen feet high, are driven into the ground, and these support a plexus of slender spars, on which is strewn so thick a layer of brushwood and branches that the sun can rarely find a crevice through which to intrude into the cool and shady camp below. Wells are sunk in favourable locations. The sinks are regularly attended to, and police duties generally well performed. The consequence is, that we are all in perfect health, although relaxed and languid from excess of heat. But this was far from being the case during the first few days after our arrival here, for then circumstances the reverse of those enumerated contributed to the generation and propagation of disease. We were crowded together, men and horses, wagons and mules, with but little shelter, with surface water muddy and lukewarm, with fresh meat which a few hours' exposure tainted, and with the refuse of camps everywhere around. Every other man had an attack of diarrhœa, but it did not continue long, the removal to the new grounds stifled the disease on its onset.

We see by the papers we receive that sunstroke is killing large numbers in the cities. Among the troops we have now no such cases, for in camp we are well sheltered, and in performing almost the only duty required of us—picket duty every fourth or fifth day—we are not much exposed, since the march to the picket-station is usually made in the early morning or in the cool of the evening. The teamsters in the Quartermaster's Department, whose duty occasions them to be much more exposed, furnish the very few cases which are to be seen in this part of Virginia.

Regimental Surgeons have nothing whatever to do at present. One reason, because few cases of sickness occur; another, the principal one, because when a man does get so ill as to be unfit for duty, he is immediately sent to the Hospital of Division by order of the Medical authorities. This Hospital is established near the camping grounds of the Ambulance Corps. It consists of a dozen Hospital tents under the shade of a huge arbour which the ambulance men have constructed over them. It is a very quiet place, and the patients seem comfortable and clean; they have plenty of attendants, plenty of supplies. There are no iron bedsteads, such as are common in military Hospitals further from the front, but the stretcher makes a useful substitute in the field. A Surgeon with one assistant is detailed in charge. This plan of collecting the sick of a division near the ambulances has proved very useful in the late campaign. There is not a sick soldier in the camp of any regiment; all are inmates of this Hospital. If, then, an order arrived directing us to march immediately, we would have no trouble with our sick. The regiments fall in and march off, and by the time they are in motion the men unfit for duty are lodged in the ambulances, which then bring up the rear of the column, so as to pick up those who fall out exhausted or footsore. At evening the tired men rejoin their regiments, and a night's sleep prepares them for the march next morning, while the sick men, if the movement is to be resumed on the morrow, pass the night in the wagons, but if a halt of a day or two is anticipated the tents are pitched, the stretchers made to do duty as beds, and an impromptu Hospital is formed. The Regimental Surgeons have thus nothing whatever to do except when a man gets sick to see him safely despatched to Hospital. The plan answers very well now when we have but two or three thousand men in our decimated divisions; but when the conscription has filled up our ranks to their normal strength of fifteen or twenty thousand men, every Surgeon shall have, I presume, to attend to his own men. Regimental Hospitals will be re-established, and that of the division broken up, on account of being then too large an affair to work smoothly in the field. Just now in these Hospitals there are but few patients, and the number of those affected with acute diseases is very small; the majority are men who, as the expression is here, have got "used up" on the late marches, and who are now regaining strength on good diet, quinine, and whisky.

When one puts the question to himself—Why have the Medical authorities, by the establishment of these Hospitals in each division, taken the direction of the cases of disease entirely out of the hands of the Surgeons in charge of regiments? it is difficult to arrive at a satisfactory answer. Is it on account of the utility of the arrangement when the army is in motion? Perhaps the idea was originated with that end in view; but why continue the institution now that the troops are quiet in camp? The patients cannot have better attention paid them by nurses, strangers to them perhaps, in Hospital, than by men, their comrades, detailed to the Hospital Department of their own regiment. They cannot be better sheltered, better furnished with supplies than they would be if in charge of their own Medical men, since division and regimental Hospitals are equally distant from the base from which those supplies are derived. They would have the same air, the same water, and an equally salubrious camping ground in the one case as in the other. It is not to prevent the spread of disease among us by contagion that the sick are in some measure removed from us, for we have no contagious diseases; and the smallness of the percentage of sick negatives the supposition that their removal was intended to prevent any depressing influence their presence might occasion among the troops. Dare we look, then, to the regimental Medical officers themselves for an explanation? Is it that the authorities, who, by the recent suppression of the use of calomel and tartar emetic, showed the distrust they had of the capabilities of these gentlemen, have come to the conclusion that it would be of more benefit to the service for them to lock their medicine chests and turn over their sick for tendance to a man of tried Professional qualifications—the Surgeon in charge of the division Hospital. This is an ugly view to take of the matter, but one is at liberty to look so at it when, knowing that there are men sick, one sees, and has seen for four weeks past, regimental Hospitals deserted, their stewards unoccupied, their attendants drawing rations form their companies instead of on Surgeon's requisition, and their Medical men seating themselves quietly to breakfast while sick call is being beat, aware that it now is but an empty sound. The arrival of the conscripts will I think, as I said before, put an end to this state of matters. These unwilling patriots, or their substitutes, are already joining us, although as yet in but small detachments. An order has been issued requiring Surgeons to examine and report on the physical condition of every man sent to join their commands. If this order be rigidly carried out it will save an immense amount of expense to Government, and of subsequent trouble to the Surgeons themselves. When this army was first organised, examining Surgeons were very careless, or duped perhaps by roguish recruiting officers. Almost every one who volunteered was accepted, and the consequence was when active service commenced a heavy bill of sickness and mortality. The Surgeons then in the field felt sorely the necessity for a strict examination of recruits, and now, having themselves that duty to perform, it may safely be augured that the physique of the conscript will be far superior to that of the volunteer army when it first entered the field.

In a late number of the *Medical Times* which reached me, I observed some remarks of yours on the volunteer Surgeons of America, *apropos* of the proscription of calomel and tartar emetic by the Surgeon-General. I have not the article beside me, but I think you jocularly predict that the next edict will be that no more field instruments are to be issued, and that those already in the possession of army Surgeons are herewith ordered to be turned in, since the Surgeon-General believes that the country has derived more harm than benefit from the indiscriminate use of these edged tools. Well, the majority of Surgeons in this army since the battle of Antietam in September, 1862, have been as thoroughly cut off from the use of the amputating knife as if such an order had actually been published and stringently insisted upon. Previous to that time it was the duty of the senior Medical officer of a regiment to decide upon all the cases occurring in his command, and should his decision be operation, to operate; but the evils arising from this licence, this want of supervision, became plainly apparent, and to prevent in a great measure in future ill-timed, ill-judged, and badly-executed interference, a staff of officers in whom confidence could be placed was commissioned, in the event of a battle, to examine, decide, and operate, the duty of the others being restricted simply to dressing. That this plan works admirably the experiences of Fredericksburg, Chancellorsville, and Gettysburg have fully demonstrated. Not only do the patients receive the best Professional skill which the division can afford, but the Surgical history of the battle is better preserved. One officer in the Hospital does nothing but record in full the histories of the various cases, whereas formerly every regiment had a record to hand in, although every one did not furnish it. Some Surgeons, through ignorance of the routine of military duty, and others through neglect, did not comply. It is not unusual also for papers in the field to get lost during their transmission from one official to another.

Since this civil war has lasted, now two years and a-half, since so many great battles have been fought, and since time and opportunity have been afforded the Surgeons for familiarising themselves with the diseases common in camp, it might be said that surely they now ought to be able to treat skilfully most of the cases which fall under their observation; and, undoubtedly, those who have had these advantages are so. But men who have been in the field since the first outbreak of the rebellion are rarities in camp. There is a continual change going on in the constituents of the Medical force, which prevents it from improving as a body, although the members of it are daily being taught lessons by experience. It is very unfortunate that the army cannot retain in its service the Surgeons it has made. The force, I think, during the last six months has deteriorated, the skill and attainments lost to it by men leaving the ranks having been greater than the additions brought by those who fill the vacancies. Many Medical men come out, and, after a few months trial of soldiering, get tired of it, just at the time, perhaps, when experience has begun to render their services of value. Others spend a longer or shorter period with the army, when they become prostrated by sickness; they obtain a short leave of absence to recruit their health, and the home comforts they then experience contrasts so strongly with the fatigues and privations of camps and campaigns, that when recovered they have not moral courage sufficient to enable them to undertake a return to the field. Others enter the service with the intention of leaving it again after a short time, their object being simply the possession of the commission which they intend using as a reputation trap to snare patients. It was only the other day that, in looking over the advertisement sheet of the *Herald*, I observed a notification to the public of New York city that So-and-So, late Surgeon of the Such-and-Such regiment, had resumed the practice of his Profession, etc. Again, a number of the Surgeons attached to the nine months' and two years' regiments did not return to the army when mustered out, in consequence of the disbandment of their commands at the expiry of their term of service. But the greatest loss the Surgical force in the field has suffered has been caused by the institution of the United States Corps of Volunteer Surgeons. The members of this body are commissioned by the President, and are employed as Surgeons of Divisions, Medical Directors of Army Corps, or are attached to the various military Hospitals now so common throughout the country. No inefficient men belong to this corps,—that of the U. S. V., as it is termed,—the searching examination to which they are subjected before being commissioned obviates all chance of the admission of any but those possessed of superior talents. The Surgeons in charge of regiments hold their commissions from the Governor of that State which has furnished the troops to which they are attached, and their duty is to be with their commands wherever stationed. Now, although the pay in both services is the same, the superiority of the position attracts the best talent in the field to the ranks of the U. S. V. corps. The men who come from civil life to fill the vacancies are but poor substitutes for those we lose. Good men come, as may be supposed, but the proportion of indifferent Practitioners is very large. They are young men of no experience, and of superficial education from the schools; men good, bad, and indifferent from the cities, who, having but poor practices, attempt to better their fortunes by going a-soldiering; men from the country, whose duty for years previously had been to attend midwifery cases. A few creep into the service, too, possessed of no papers but the commission which by some means they have managed to obtain, such as dentists and druggists who have read perhaps a little. But the purest example of ignorance commissioned in the American Medical Service that I have yet met was in the person of one who might have been styled a political Surgeon. The case, I believe and hope, is unique. He had been a politician. He had represented a county in a certain State during the previous session, and to reward him for party services, probably, he had received the appointment. He knew nothing of Medical science, nor of any other science whatever. He was very illiterate. It amused me to look over the books of the regiment, as kept by him. From his Register I learned that *diorhe*, *rhumatism*, and *chills* and *fever* were the only diseases of which he was cognisant, with the exception of one case of *sore log*. His prescription-book showed that, in his opinion, the compound cathartic pill of the U. S. Pharmacopœia, or, as he ordered it, *pill cat. co.*, iii., was a specific for all the diseases to which the soldier is liable. His ignorance was too gross for him to be able to keep up appearances for any time, and on a gentle hint having been dropped him concerning the existence of a Board of Examiners at Washington, he took sick, and found not the least difficulty in having his resignation—based upon his ill-health—accepted.

To tell now a more agreeable tale of the service, I shall mention to you the establishment of a Medical society in one at least of the divisions of this army. Its meetings are weekly, when they can conveniently be held, and are well attended, and there matters interesting to the Military Surgeon may be heard discussed with a freshness that smells of the field and the vigour which experience gives.

Having been in Washington a few days ago, and having a spare hour, I paid a visit to the Army Medical Museum, feeling an interest in it from having seen so many specimens preserved after the late battle to enrich it. Its formation was commenced in August, 1862, and the proportions which it has now assumed at the end of its first year of existence speak strongly in testimony of the energy and enthusiastic zeal displayed by its curator, Dr. J. H. Brinton. It numbers now about two thousand objects. The majority of them are cases of Surgical interest, but there is a goodly nucleus of Medical preparations, and which is daily increasing in magnitude. There are quite a number of missiles of all sorts—grape, spherical, case, and buck shot, rifle and round bullets, and pieces of shells, even Indian arrows, most of them extracted from the body. There is, in addition, a complete set of projectiles for small arms and field guns presented by the Ordnance Department of the army. The collection is at present in a room in the building used by the Surgeon-General as an office, but it will not remain long there. A house is being fitted up for it—a sombre brick building it is, that seems as if it had been built with a view to its one day becoming a museum. It is small somewhat, on account of the funds voted for the purchase of a house having been small, and then probably because the collection was not expected to grow so rapidly as it has grown. I dare say that in the course of a short time, if it succeeds so well as it has been doing—and as there is every reason to expect that it will—a mansion will be assigned worthy of it. The room on the ground floor of the house in preparation is being fitted up as a class room. By and by the student of Military Surgery will here have opportunities which, if taken due advantage of, will place the American Surgeon on a higher professional footing than he holds at present.

LIVERPOOL.

The complete and almost ludicrous break-down of the case of Hodges *v.* Hakes was very satisfactory in one way, and the dictum of the judge in nonsuiting the plaintiff, "that it would never do to find a verdict against Surgeons *who had done their best under the circumstances*," may, I hope, be endorsed by all his learned brethren on the bench. In one way, however, the sudden collapse of the attack was not so satisfactory, since the defendant would, as a matter of personal feeling, have preferred that the case should have been argued on its merits, so sure were they of being able to establish the justifiability of the attempt to reduce the limb, and to prove that there had been no want of skill in the treatment.

As it was, however, there really was nothing to go to the jury. The Attorney-General, Mr. Edward James, made a very good speech for the plaintiff, suggesting all the Surgical objections that might be made to the treatment; but as his assertions were not evidence, and he put no one into the witness-box to support them, the case simply rested on the evidence of the plaintiff and one of his friends. A few skilfully put questions by Mr. Brett elicited from the plaintiff himself the admission that he had been treated with great care and kindness, and then, at the conclusion of the plaintiff's case, the suggestion that there was no case met with the immediate acquiescence of the judge, and the matter was at an end.

The Assize which ended with the case I have just mentioned will long be remembered as one of the "bloodiest" of recent times. Five convictions for murder, and four executions, in addition to another unquestionable murder, the perpetrator of which would have been tried at these Assizes had it been possible to apprehend him, constitute a social phenomenon well worth notice. All the cases, excepting that of the wretched girl who drowned her illegitimate child, and whose sentence has been commuted to penal servitude for life, occurred in this town. Four out of the five murderers were sailors, one of them a Spaniard, the other three British. The Spaniard stabbed a man while in a state of rage at some supposed insult; one of the others while in a state of drunken madness smashed the skull of his landlady because she wished him to go to sea. Another, who had been drinking with a prostitute, and who, during his drunken sleep, was robbed in a brothel, failing to get the "satisfaction" he wanted from the police, purchased a knife, went back to the brothel, and ripped up the belly of its mistress; a fourth, who is still at large, stabbed a prostitute in the street, for what reason is not known.

The last, a working man, almost always drunk, and constantly threatening his wife's life, at last, in drunken rage, killed her by stabbing her with a chisel. But what have Medical men, especially, to do with these things—one thing, I think. We see that of the four who hung in one ghastly row at Kirkdale last Saturday week, three, at any rate, owed their presence there to drink. Now, though much of the evil of this vice comes under the cognizance of the law, much more, I think, comes under our eyes as Medical men. I doubt not that our perception of its evil is dulled partly by the frequency with which it presents itself, partly by the apparent hopelessness of efforts to remedy it, partly it may be by the indiscreet zeal of many teetotalers. I am not going to inflict on your readers any suggestions of my own as to the remedy for this gigantic mischief; but I do think this, that, were we, as a Profession, to represent to Government the great benefit that must result from a fair and impartial inquiry, conducted by a parliamentary commission, into the amount of vice, crime, and disease which is traceable by really scientific evidence to excessive drinking, that it is not unlikely that such a suggestion might be carried with effect.

While speaking of alcoholic subjects, I may mention that the large consumption of these stimulants in the Workhouse Hospital has been brought before the committee, and is to be considered at its next meeting. It would be a great matter if we could arrive at something like an idea as to what ought to be the average consumption in a large Hospital, and what is the most likely to fulfil the end in view—the cure of the patients with the least expenditure. I have seen some interesting statistics with regard to the Royal Infirmary, which appear to show that there a considerable increase both in the expenditure for stimulants and food has been attended by a diminution in the average weekly number of patients, although the annual number of admissions was higher than before the increase. One certain cause of the high rate of expenditure of brandy at the Workhouse Hospital has been the continued high average of fever cases, most of which are admitted in a state of extreme exhaustion, and are put upon a mixture of chloric æther and ammonia, alternated with the mistura vini gallici of the Pharmacopœia. The reason for the administration of brandy in preference to other stimuli, is that whisky, the only spirit to be compared with it in stimulating power, used to be supplied of so feeble a quality that its use was abandoned. Whisky, doubtless, is far cheaper, and, when it is the real Scotch or Irish, may form a very good substitute for brandy. Another cause inducing a large consumption of porter, especially in the Surgical wards, is rather a curious one, and depends on the wretched quality of the nursing in this division. Whenever there is any case of operation, or any other requiring a good deal of looking after, it is a very frequent, almost constant custom in fact, to get one of the other patients to act as his nurse, and this good service is rewarded by the volunteer nurse being ordered a pint of porter daily. The reason of the badness of the nursing is this. There is an absurd regulation, which the Poor-law Board are accused of having framed, which forbids the sending over as nurses to the male division of the House any pauper women under sixty years of age. The consequence is, that a number of poor, worn-out old women, utterly unfit most of them for the duties of a nurse, are the only recognised nurses on the male side. On the other side, where there is no restriction as to age, the nursing is far better attended to, and without putting the parish to the expense of nobody knows how many bottles of porter. I do not anticipate, however, that the Workhouse Committee will make any objection to the supply of any quantity of anything which may be shown to be necessary for the sick.

To turn now to another subject. It may be interesting to those of your readers who are still uncertain as to the merits of the sarracenia purpurea as a remedy for small-pox, to mention that about twenty consecutive cases under the care of Dr. Gee in the parish fever Hospital, were treated with the infusion of this plant; but that the result of the trial was purely negative, neither the course of the disease, nor the charactor of the eruption showing any difference from that of other cases in which it was not used. I am glad to be able to report another case to add to the list of successful ovariotomy operations, that of a married woman, aged 35, the mother of four or five children, in whom the tumour appeared to have been developing for about eighteen months. The cyst was tapped six or seven weeks before the operation, and about sixty-three pints of fluid had been drawn off. The cyst was unilocular. The full details of the case I am not able now to give, but they may be summed up in this,—that the patient rallied well from the operation, and that she has progressed without a single bad symptom, and now—about three weeks since the operation—I am informed that she is walking about, and expresses herself as feeling as well, or better, than ever she did.

This morning (September 22) an old-standing dislocation of the hip was reduced at the Royal Infirmary. The patient was a boy about fourteen years of age, who, about four months since, feeling the joint painful to move, kept it quiet, resting with the knee bent over a pillow for some considerable time. On attempting to walk he found he could not, and on examination his limb presented all the signs of dislocation into the thyroid foramen.

In this case the operation appeared to be completely successful, and the bone is now, I believe, in its normal position.

GENERAL CORRESPONDENCE.

AN OPHTHALMOSCOPE ON THE "GHOST" (a) PRINCIPLE.

LETTER FROM MR. J. ZACHARIAH LAURENCE.

[To the Editor of the Medical Times and Gazette.]

SIR,—Permit me, through your columns, to make public an ophthalmoscope which I have just invented on a new principle. It consists of—

(1.) A *non*-perforated concave mirror;
(2.) An ordinary ophthalmoscope convex lens; and
(3.) *A sheet of plate-glass.*

The light from a lamp is reflected by the mirror through the plate-glass and through the lens into the patient's eye. From hence it returns, strikes the lens, and forms a real inverted image of the fundus oculi at the focal length of the lens. The rays of light which diverge from the real image strike the sheet of plate-glass, and hence are reflected to the eye of the observer. The fundus oculi (optic nerve vessels, etc.,) is thus seen direct (laterally) by an observer who looks on the plate of glass, just as in a looking-glass.

I shall be happy to show the instrument to any one at the Surrey Ophthalmic Hospital.

I am, &c.
J. ZACHARIAH LAURENCE.
30, Devonshire-street, Portland-place, September 17.

MEDICAL NEWS.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, September 10, and Thursday, September 17, 1863:—

John Leigh Becker, Maidstone; John Rigg, Southport; Thomas Miles, Totness, Devon; Sidney Rossell Henson, Hull; George Wall, Stourbridge.

The following gentlemen also on the same days passed their First Examination:—

Edward Reynolds Ray, Guy's Hospital; William Reuben Booth, St.

(a) The beautiful optical illusion ("ghost") of Messrs. Dircks and Pepper. My friend Dr. Giraud-Teulon writes to me,—"I have convinced myself of the reality of the facts you announce. Your idea is very ingenious; will it have sufficient practical bearing to replace former methods?" This I cannot answer till I have a better instrument made than the rough one I made my original discovery with.

George's Hospital; George E. Legge Pearse, Westminster Hospital; Philip Cowen, St. Thomas's Hospital.

At the recent Examination for Prizes in Botany, given by the Society of Apothecaries, the successful candidates were:—

1. Henry Greenway Howse, Guy's Hospital, Gold Medal; 2. Ralph Gooding, King's College, Silver Medal and a Book.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Atkinson, Charles, S.A., M.R.C.S. Eng., has been elected House Surgeon to the West Norfolk and Lynn Hospital.

Bristowe, John S., M.D. Lond., has been elected Physician to the Asylum for Female Orphans, Westminster-road.

Brittain, J. Lewis, M.D. Edin., has been appointed House Surgeon to the Chester General Infirmary.

Browne, Samuel, L.Q C.P.I., has been re-elected Surgeon to the General Hospital, Belfast.

Buchanan, Alexander, L.R.C.S. Edin., has been re-elected Medical Officer of the parish of Tyree, Argyleshire.

Corrie, James J., M.R.C.S. Eng., has been appointed Resident Medical Officer to the Leeds Fever Hospital and House of Recovery.

Curme, Decimus, M.R.C.S.E., has been appointed Visiting Surgeon to the Chester General Infirmary.

Dewar, William Husband, L.R.C.S. Edin., has been appointed Surgeon to the County Prison, Kinross.

Duchesne, Robert, M.D. St. And., has been appointed Medical Officer and Public Vaccinator to the Woodford District of the West Ham Union.

Head, Edward. M.B., Lond., has been elected Physician to the Metropolitan Free Hospital.

Irvine, John W., L.R C.S. Ed., Honorary Surgeon to the Dispensary, has been appointed Lecturer on Physiology at Queen's College, Liverpool.

Johnson, Thomas Mason, M.D. St. And., has been appointed Physician's Assistant to the Manchester Royal Infirmary.

Matthew, Alfred John, M.R.C.S. Eng., has been appointed Junior House Surgeon to the Dispensary, Preston, Lancashire.

Pirrie, John M., M.D. T.C. Dub., has been re-elected Physician to the General Hospital, Belfast.

Smith, W. Abbotts, M.D. St. And., has been elected Physician to the Metropolitan Free Hospital.

Tuke, J. B., M.D., has been appointed Assistant-Physician to the Royal Lunatic Asylum, Morningside, Edinburgh.

Walker, George Edward, M.R.C S. Eng., has been appointed Physician's Assistant to the Manchester Royal Infirmary.

Wiltshire, J., M.R.C.S. Eng., has been appointed Surgeon to the Military Hospital at Marchwood.

Wright, E. Perceval, M.D, F.R.C.S.I., has been appointed Ophthalmic Surgeon to Dr. Steveens' Hospital, Ireland.

DEATHS.

Allanby, John Smeeton, M.D. Edin., Assistant-Surgeon 95th Regiment, at Hydrabad, Sindh, on July 28.

Bull, Joseph, M.R.C.S. Eng., at Petersham, New South Wales, on July 15, aged 38.

Cartwright, John Edward, M.R.C.S. Eng., of High-street, Ramsgate, at 73, Sloane-street, London, on September 15.

Coldstream, John, M.D. Edin., of Edinburgh, at Gilsland, Cumberland, on September 17.

Harris, Lewis, M.R.C.S. Eng., at Totnes, Devon, on September 13, aged 28.

Henderson, Alexander, M.D. Edin., at Caskieben, Aberdeenshire, and of 6, Curzon-street, London, on September 16, aged 83.

Hodson, John Clayton, M.R.C.S. Eng., at Kilburn, N.W., on September 9, aged 38.

King, William, in practice prior to 1815, at Albion-terrace, Stepney, on September 20, aged 81.

Moor, William Henry, M.D., at Buntingford, Herts, on September 19, aged 33.

Muirhead, Dr. Alexander, Deputy-Inspector-General R.N., at Orcadia-villa, Isle of Bute, on September 18.

Mullins, George, at Holland-street, Brixton, on September 7, aged 72.

Richardson, John, L.F.P.S. Glasg., at New York, late of Knapton, near Thirsk, Yorkshire.

Roberts, Dr. D., at Boston, United States, on August 15, aged 36, late of Mallwyd, Merionethshire.

Robinson, Benjamin, M.D. St. And., of Rotherham, Yorkshire, at Cheltenham, on September 13, aged 47.

Rudd, William, L.S.A., at Muker, Richmond, Yorkshire, on September 12, aged 52.

Tierney, D. J., M.D., at Melbourne, Victoria, on May 22.

Webb, Allan, M.R.C.P., F.R.C.S. Lond., Surgeon-Major of the Bengal Medical Staff, at Seaton-villa, Clevedon, Bristol, on September 15, aged 56.

Wright, James Dennis, at Clarendon-park, Salisbury, on September 15, late Surgeon-Major Grenadier Guards.

Suicide of an Unqualified Practitioner.—The newspapers have lately contained an account of the suicide of a druggist, who took prussic acid in order to escape an inquiry into the death of a woman whose death in parturition had been owing to his mal-praxis.

Testimonial.—A handsome electro-plated candelabrum, or epergne, was presented by the members of the Norwich Pathological Society to their Honorary Secretary, Mr. T. W. Crosse, at the anniversary dinner which followed the annual meeting of the Society held on the 10th ultimo. After the usual loyal toasts, the chairman (Dr. Lombe), in introducing the toast of the evening, took occasion, in an eloquent and appropriate speech, to refer to the very efficient services which Mr. Crosse had so freely given to the Society from its very commencement,—a period now of fifteen years' duration, and in presenting him with the testimonial expressed, on the part of the subscribers, a hope that he would accept it as a token of the feeling of regard which they entertained for him personally, as well as of their thanks for his long-continued and valuable services, with the addition of a hope that those services would still continue to be available to the Society. The candelabrum bore the following inscription on its base:—"Presented to Thomas William Crosse, Esq., by the members of the Norwich Pathological Society, to mark their sense of his long and valuable services as their Honorary Secretary, September 10, 1863."

The Health of Plymouth.—The Report of the Plymouth Public Dispensary, presented at the annual meeting by Dr. Cookworthy, the Senior Physician, contains the following on the increase of zymotic disease in Plymouth:—"We find the rate of the aggregate mortality on the quarter to have been 6·75 per thousand, and the centessimal proportion of zymotic deaths to deaths from all causes to have been 36: that is, 36 preventable deaths in every hundred! And it also appears that whilst the aggregate mortality was greatest in June and smallest in August, the zymotic or preventable mortality was smallest in June and greatest in August, thus confirming the dictum of the General Board of Health, that zymotic causes are distinct from those causes which affect the general mortality of a people, and may, accordingly, be lessened, if not entirely removed by wise sanitary measures. Looking to the results of the corresponding quarters of the last four years, we cannot congratulate ourselves on any progressive improvement in this respect in Plymouth; for the centessimal proportion of zymotic deaths to deaths from all causes was, in August, 1860, 13 per cent.; in August, 1861, 20; in August, 1862, 23; in August, 1863, 36."

The Wolverhampton and Dudley Mystery.—At the adjourned inquest which took place on Tuesday, the 22nd inst., Dr. Alfred Hill gave an account of the chemical analysis of the viscera and portions of dress of the deceased woman Steadman. From the stomach he obtained by the iodic acid test indications of morphia, but the analysis was not entirely satisfactory for the reaction with the nitric acid test was only dubious. No poison was discovered in the liver, spleen, or any other organ. The stains on the dress were found to consist of tar and fat, an important fact, as it will be remembered that the body of the deceased man Cheenery was found painted over with tar. A druggist's assistant of Bilston has come forward to identify the laudanum label found on a bottle with the body of Steadman as having labelled two pennyworth of laudanum sold by him to a woman who wore clothes similar to those which belonged to her.

Social Science Meeting at Edinburgh.—The arrangements for the seventh annual meeting of the National Association for the Promotion of Social Science, commencing at Edinburgh on October 7, are rapidly approaching completion. The President of the Public Health Department is Professor Christison; Vice-Presidents—Dr. Craigie (Pres. Coll. Physicians), Dr. Newbigging (Pres. Coll. of Surgeons), and Mr. Lindsay, Provost of Leith. The Secretaries of the Department are Dr. Markham and Mr. R. Rawlinson, C.E., in conjunction with Dr. Littlejohn, Dr. Scoresby Jackson, and Dr. Stevenson Macadam, who act as Local Secretaries. Among the papers sent in to be read in this Department, at the meeting which commences on October 7 the following are of special interest:—"The Sanitary Statistics of Colonial Native Schools and Hospitals," and another paper on the "Army in India," by Miss Florence Nightingale. "The Changes which have Occurred in the Type of Disease in Edinburgh during the last Fifty Years," by Professor Christison. "Diseases in Cattle," by Professor Gamgee. "The Sanitary Arrangements of Edinburgh as compared with other Large Towns," by Dr. Littlejohn. "On the

Necessity for Prospective Legislation to Prevent Dwelling-houses being Built in disregard of the Conditions of Health," by Colonel Oldfield. Various other important subjects will be brought forward, as the sickness and mortality of merchant seamen; the contamination of water by sewage and by public works; the use and abuse of poisons for agricultural purposes; questions relating to public vaccination, etc. It is expected that Prince Alfred and one of the Danish princes will be present at one of the concluding meetings of the Association.

EDUCATIONAL VACCINATING STATIONS. — In order to provide for the granting of those Special Certificates of Proficiency in Vaccination, which, under the regulations of the Privy Council, are required to be part of the Medical Qualification for entering into contracts for the performance of Public Vaccination, or for acting as Deputy to a Contractor, the following arrangements are made :—1. The Vaccinating-stations, enumerated in the subjoined list, are open under conditions appointed by the Privy Council, for the purposes of teaching and examination. 2. The Public Vaccinators officiating at these Stations are authorised by the Privy Council to give the required Certificates of Proficiency in Vaccination to persons whom they have sufficiently instructed therein; and 3. the Public Vaccinators, whose names in the subjoined list are printed in *Italic letters*, are also authorised to give such Certificates, after satisfactory examination, to persons whom they have not themselves instructed.

Cities and Towns having Educational Vaccinating Stations.	Places used as Educational Vaccinating Stations.	Public Vaccinators authorised to give Certificates of Proficiency in Vaccination.
London	(Principal Station) Surrey Chapel, Blackfriars-road.	*Mr. James Furness Marson.*
	(North-West Station) 13, Lisson-grove.	Mr. James George Gerrans.
	(West Station) 14, Lower Belgrave-street.	Mr. William Prue Jorden.
	(East Station) 1, Well-street, Wellclose-square.	Mr. William Jones Lewis.
	(North Station) Tottenham-court Chapel, Tottenham-court-road.	Mr. George Simpson.
Birmingham ..	The General Dispensary ..	*Mr. John Garner.*
Bristol	7, St. Augustine's-place ..	*Mr. Wm. Yeoman Sheppard.*
Hull	29, Nile-street	*Mr. John Hare Gibson.*
Liverpool ..	The Ladies' Charity, Parr-street.	*Mr. Arthur Browne Steele, Mr. John Henry Wilson,* and *Mr. John Fenton,* acting conjointly, or at least two of them together.
Manchester ..	159, Rochdale-road	*Mr. Ellis Southern Guest.*
Newcastle ..	Bricklayers' Hall, Castle-garth.	*Dr. Thomas Fothergill McNay.*
Sheffield ..	St. George's-terrace	*Mr. Henry George Allanson.*
Edinburgh ..	The Royal Public Dispensary.	*Dr. William Husband.*
Glasgow ..	The Hall of the Faculty of Physicians and Surgeons.	*Dr. James Dunlop.*

INJURIOUS ACTION OF LEAD PIPES ON WATER. — The importance of discovering a really efficient means of preventing the injurious action of lead pipes on water is universally acknowledged, and the experiments of Dr. Crace Calvert have proved beyond question that no proposition hitherto brought forward has been calculated to remedy the evil complained of. A discovery, however, has now been made through which the water supplied by leaden pipes may be obtained by the consumer as pure as from the original source. Dr. H. Schwartz, of Breslau, has discovered a means by which the portion of the lead forming the interior surface of the pipe may be converted into an insoluble sulphide, the natural consequence being that the water passing through will be as free from contamination as if glass were used. The means by which Dr. Schwartz effects this conversion are extremely simple. He simply passes a strong solution of the sulphide of an alkali through the pipe to be acted upon, and the process is completed. This solution, which is either a sulphide of potassium or of sodium, is used at a temperature of about 212° F., and is allowed to act upon the metal for from ten to fifteen minutes. It is stated that, in practice, the boiling solution of caustic soda and sulphur is found to answer every purpose.—*Mining Journal.*

HANGED BY ACCIDENT.—On September 21, Dr. Lankester held an inquest touching the death of Frank Williams, a lad of 14 years of age, which had taken place under rather curious circumstances. From evidence given in the case it appeared that Williams was employed in Lister's-works, in the Holloway-road. On Friday afternoon one of the workmen was about to enter a room in which photography was carried on, when he found some obstruction to opening the door. He pushed the door in, and on looking behind it he saw Williams suspended by a jacktowel which was attached to the back of one of the panels. The lad was cut down immediately, but was quite dead. Arthur Stothard, who was in the same employment as the deceased, stated that he had frequently seen the workboys twist the towel about their necks in play for the purpose of swinging themselves round. It was supposed that this was the way in which Williams had accidentally hung himself. His feet touched the ground when he was found. Mr. Taylor, the Surgeon who had examined the body, stated that he had found two contusions on the head, and marks of a ligature round the neck; the tongue was protruding and congested, and saliva was coming from the mouth. The Coroner said the evidence seemed to show that the deceased lad had been swinging from the towel in the same way as other boys in the works had been accustomed to do, and that it had become twisted about his neck in a way that rendered him unable to extricate himself. The jury found a verdict of "Accidental death."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Professor Huxley's Lecture is unavoidably postponed this week.

Dr. Edmunds's communication on the case of the bank clerk arrived too late for publication this week.

Mr. James Fowler.—We believe that the treatment is now being tried at a large Metropolitan Hospital. The address our correspondent requires is 25, Somerset-street, Portman-square, W.

Quæro.—The question of titles is at present an open one. By courtesy, yes; by right, we think not.

A. B. C., General Hospital, Bristol.—Candidates for Assistant-Surgeoncies in the Royal Navy, besides the production of the prescribed certificates and diplomas, have to undergo an examination "touching their qualifications in all the necessary branches and points of Medicine and Surgery." If our correspondent wishes further information, he had better apply by letter to Sir John Liddell, Kt., M.D., the Director-General of the Navy Medical Department.

The *Indian Herald* of August 8 has a reprint of a capital article from the *Deccan Herald* of July 31, on the Army Medical Department. We, on behalf of our Profession, tender our thanks to the public-spirited journalists who give us their help, and who show up the shabbiness and miserable false economy of our men in office.

In the course of study prescribed by the Court of Examiners of the Apothecaries' Company, published last week in our Students' Number, the subjects of study for the third year were accidentally omitted. They are as follows :—

"Third Year.—Winter Session: Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice. Summer Session: Practical Midwifery and Vaccination; Morbid Anatomy; Clinical Medical Practice."

The Regulations to be observed by Candidates for the double Qualification in Medicine and Surgery, to be conferred conjointly by the Royal College of Physicians of Edinburgh, and the Royal College of Surgeons of Edinburgh, were forwarded to us too late for insertion in the Students' Number. The course of study prescribed corresponds with that required for the Diploma of the Royal College of Surgeons of Edinburgh, except that in addition Candidates must attend a three months' course of Pathological Anatomy, and a three months' course of Botany. The fee payable for the two Diplomas is £16, of which £6 is payable after the first examination in Anatomy, Physiology, and Chemistry, and the remaining £10 after the second examination in Medicine, Surgery and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica, and Pharmacy and Medical Jurisprudence.

Reading by Rail.—The effects of mere railway *travelling* on health having been exhausted as a subject for popular Medical writing, we see that a French Physician, a certain Dr. Legrand de Saulle, has announced the discovery that reading on a railway journey is extremely fatiguing to the eyes, owing to the jolting of the vehicle. He goes on to say that this fatigue induces headache, and often orbitary pains round the eyes, with a slight congestion of the retina, which, when the habit has become regular and inveterate, and the subject is advanced in age, may in the end determine a real congestion of the brain. We wonder that the effects of eating and drinking *en route* have not been investigated in a series of papers by some of the zealous guardians of the public health. How many attacks of dyspepsia have had their origin in the scalding coffee and soup at Swindon? What is the influence of the "pocket pistol" on the cerebral and gastric functions of commercial travellers? etc. We hoped that before this a respected contemporary would have issued a commission to inquire into the physiological effects of travelling in cabs and omnibuses.

Civil Medical Practitioners in Charge of Soldiers.—Our attention has been called by a correspondent to a letter which appeared in the *Daily Southern Cross*, a New Zealand paper, of May 18, in which the writer inveighs, in no measured terms, against a circular issued by Dr. Mouat, the Principal Army Medical Officer in New Zealand, to the civilian Practitioners of Auckland, as derogatory and degrading to the Profession, and as likely to be injurious to the interests of the sick soldier. The following is Dr. Mouat's circular:—

"Principal Medical Officer's Office,
"Auckland, May 9, 1863.

(Circular)

"Sir,—I have the honour to request you will be pleased to inform me if you are willing and prepared to undertake Medical charge of troops and their families at this station in the event of your services being required; and if so, and in possession of the necessary diploma, etc., you will be good enough to state the terms upon which you are desirous to be employed.

"I shall afford the requisite information as to the duties, etc., on your calling at my office on Monday, the 11th instant, between one and two o'clock p.m. "I have, &c. "J. Mouat, etc., etc."

We must entirely acquit Dr. Mouat in this matter. We happen to know that, in the employment of a civil Practitioner to attend troops, it is the duty of the Army Medical Officer who engages him first to ascertain what the rate of his charges will be. If the Army Medical Officer neglect to do this, he would himself have to reimburse Government should the charge be considered exorbitant. Everything in the public service is provided by contract, and, in the interest of the tax-payers at home, it is right that it should be so. Still, it might have been better, as suggested by the writer in the *Daily Southern Cross*, if Dr. Mouat had stated the emolument the Government proposed to allow, and had then asked for candidates and testimonials.

Dr. Beale's Clinical Microscope.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In the useful article on Cheap Microscopes contained in your last week's impression, you make no mention of a form of instrument which is not only highly serviceable at the bedside, but which has shortened many a hour of weary attendance on a lingering labour, and given increased pleasure to many a country ramble. I allude to the instrument known as Dr. Beale's clinical microscope, manufactured by Matthews, of Portugal-street, and which, with an admirable inch or half-inch object-glass, and leather sling, costs £3. Baker, I believe, makes a similar instrument. I carry two or three pairs of glass slides in my pocket, and need hardly add that instructive or amusing objects are never wanting.

I am, &c. Thomas Edward Amyot.

Diss, Norfolk, September 16.

A New Ophthalmoscope on the Ghost Principle.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having, in the absence of Mr. Zachariah Laurence from town, made several trials with the new ophthalmoscope which he has lately invented and described, I beg to state that although the instrument is at present in a very rude and imperfect form, yet, in every case I have examined with it, I have been able to obtain a distinct view of the fundus oculi, with the entrance of the nerve and the minute blood-vessels. This ophthalmoscope possesses a very great advantage—that the image which is projected on to the plate glass is erect, and not inverted, as is the case with the ordinary ophthalmoscope. I am, &c.

Robert C. Moon, House Surgeon.

Surrey Ophthalmic Hospital, September 21.

Information for Surgeons intending to enter the Army Medical Department.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am an Assistant-Surgeon in a regiment in India, and my duties consist in attending ball practice, and of making those disgusting minute inspections of the men and their privies and latrines, and of treating the venereal cases that occur in the regiment; these duties I share in common with two other Assistant-Surgeons.

The Surgeon of the regiment claims the prerogative of distributing the sick in Hospital in consequence; never by any chance have the "Assistants," as we are termed, had any other but venereal disease to treat.

Such are the opportunities of improving our professional knowledge, and of preparing for an examination after five years' service. And this grievance, in addition to the hundreds of others relating to pay and position, is sufficient to account for the difficulty the Medical Department has in recruiting itself when all other branches of the service are crowded with applicants for commission. I am, &c. Veritas.

The Indian Medical Service.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I was glad to see in your issues of the 11th and 18th July a short notice of the grievances of the Medical service. By the mail of the 18th of July it is with deep regret that we observe that there is to be no amalgamation of the two Medical services, but there is to be a Medical Staff Corps composed of graduates, Portuguese, and half-castes. "Hope deferred maketh the heart sick." At the commencement of the last Session of Parliament, Sir C. Wood is reported to have said that the scheme for the amalgamation had been approved of by the Governor-General, the Indian Council, and that it was then with the Horse Guards. More than once Sir C. Wood has been asked about the scheme during the late Session, and always the same reply was given, except once he added great care was necessary, on account of the great expense.

Last month Dr. Pitman, of the 3rd Bombay Cavalry, an officer who has served 19½ years without a day's leave, applied for his furlough. It was refused him by the authorities on account of the paucity of Medical officers; he afterwards managed to get a Medical certificate, when the authorities were obliged to let him go. Since 1858 we have been cheated out of the pay rank; certainly that could be given us at once, and allow the Medical Staff Corps to be formed afterwards.

We shall never get justice I am afraid until we can prevail upon parents and guardians educating their sons for the Army Medical Service. The greatest punishment a father could inflict on his son would be to make a Bombay Dr. of him. I am, &c. Z.

Ahmedabad, August 17.

University of London.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—A correspondent has lately troubled you with some grievances connected with the second M.B. examination of the University of London. The senate has granted him prompt redress, may I hope for the same?

Many of the candidates at the above examination are engaged in private practice in different parts of the country, and it is a matter of importance with most of them (especially in such a month as November) that their absence from work should be as brief as possible. But the arrangements of this examination oblige a candidate to remain in London eight days in addition to the time consumed in travelling, while the examination itself occupies only five days.

Conceding to the examiners all the necessary opportunity of reading the papers, and thereby gaining the data for the oral examinations, it might be expected that the whole matter could be concluded on the Saturday following the Monday morning on which the examination begins. Those candidates who intend to compete for honours would either stay in London, or return and come up again. The alteration I now propose would probably be a boon to all concerned. I am, &c.

September 15. Another First M.B.

Antidote for Aconite.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Prescott, in the "Life of Philip II." vol. iii., p. 65, says, "Don Alonzo Portocarrero, the scion of a noble house in Andalusia, whose sons had always claimed the front of battle against the infidel, was twice wounded by poisoned arrows, for the Moors of the Alpugarras tipped their weapons with a deadly poison distilled from a weed that grew wild among the mountains." In a foot-note Prescott observes: "The poison was extracted from aconite; it was of so malignant a nature that the historian Mendoza assures us that if a drop mingled with the blood flowing from a wound it would ascend the stream and diffuse itself over the whole system." Quince juice was said to furnish the best antidote.

Again, in the "Life of Ferdinand and Isabella," vol. iii., p. 53, Prescott tells us that "the Moors adopted a custom of poisoning their arrows, distilling for this purpose the juice of aconite which grew rife in the Sierra Nevada, near Granada; a piece of linen or cotton cloth steeped in this decoction was wrapped round the point of the weapon, and the wound inflicted by it, however trivial in appearance, was sure to be mortal." Further on the author says, "according to Mendoza a decoction of the quince furnished the most effectual antidote known against this poison."

According to our best toxicologist no antidote has yet been found that will counteract the effects of this virulent poison. Perhaps it may be in the power of some of your readers to procure the quince from Spain, and so test its quality as an antidote, that which is to be met with in druggists' shops would, I should think, be of no value.

I am, &c. Charles Williams.

Norfolk and Norwich Hospital, September 14.

A Medical Circular.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Not long since your attention was drawn to a meeting of Medical men at Bedford, at which a Medico-ethical Society was formed. A gentleman not unknown in the above Society has caused to be distributed in the town large numbers of the enclosed circular. I think for the benefit of some of the Profession who may be commencing practice, the idea might be useful.

The gentleman who issues the circular is a M.R.C.S. and L.S.A. If you could find space in your valuable Journal for the insertion of his list of prices you would show the Profession the means some men resort to for obtaining practice. I am, &c.,

Bedford, September 14. Ecce Homo.

The following is the handbill our correspondent encloses:—

"MEDICAL CLUB,
"5, St. Peter's-Green, Bedford.
"Terms per Quarter for Medicine and Attendance.

	s.	d.
A man, wife, and family of more than two children	2	6
Ditto, with not more than two children	2	0
Man and wife	1	6
Any single person above 16	1	0
Family under 16	1	0
Midwifery, if paid at time	10	6

"All payments to be made in advance. Entrance may be effected at any time.

"Patients to attend at Mr. Carter's Surgery at 9 o'clock any morning, or 6 in the evening. If unable they will be visited."

Foreign Body in the Vagina.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The following case may perhaps not be uninteresting to many of your readers:—

About 3 a.m. on Sunday, August 16, a message was sent to my house that a young girl, aged 17, was in great agonies from inflammation of the bowels, and that her screams could be heard for a considerable distance. On my assistant's arrival at the house, the girl admitted what she had hitherto concealed, that on the previous evening she had been with a young man, who, "after having connection with her, had put something into her private parts which had caused her great pain, that she had scarcely been able to walk home, and the pain was rapidly increasing."

Upon examination, a substance was felt, with a rough, jagged surface, which was with great difficulty extracted, and found to be a piece of sulphate of copper, weighing about six and a-half drachms; but considering that it had been there for four hours, a deal must have been dissolved, so that probably an ounce was used.

Since then the girl has been under my care, and has been treated by diluents, demulcents, sedatives, etc.

The whole of the mucous membrane of the vagina has sloughed away, large pieces of it having been washed away by the urine. The neck of the bladder did not escape, for she is not able to contain her urine. There has also been a deal of diarrhœa, probably from neighbouring irritation. With the exception of the incontinency of urine, the girl has quite recovered and gone to her work.

This case possesses several points of interest. It is a well-known popular fallacy that a piece of blue stone applied to the vagina is a test for gonorrhœa, causing pain if that disease be present; and in this case it was used for that purpose, but whether it was left there intentionally or accidentally is not known. The unwillingness of the girl's friends to prosecute, and the promise of the young man to pay all expenses if it were kept quiet, has prevented a full investigation into the case, although I think, in a medico legal sense, it is a case which ought not to have been hushed up.

Many cases of "foreign bodies in the vagina" are on record, but I am not aware of a similar case to this having ever occurred.

I am, &c.

Derby, September 10. George Taylor, M.D., M.R.C.S., L.S.A.

Is old Parr Dead?

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have been informed by a gentleman who is under my professional care, that he is in the habit of administering to his children a mixture which, he says, is recommended by two physicians, Drs. O'Donnell and Stookes, of Liverpool. The mixture is called "Martin's Infants' Preservative for children cutting their teeth," and each bottle is usually enclosed in a wrapper which is said to bear certificates from the two Medical gentlemen named. Perhaps Drs. O'Donnell and Stookes will be able through the medium of your columns to inform your readers whether the mixture is worthy of trial by the Profession at large.

By-the-bye there is said to be a mixture called "Guttæ Antiscrophulæ," which is sold by the same druggist, Mr. Martin. No doubt Mr. Heys, Surgeon, of Scotland-road, will kindly point out all the good properties of this compound. I am, &c. Godfather's Cordial, M.D.

Liverpool, September 1.

We have received a copy of the "wrapper" referred to by our correspondent, and from it extract the following certificates:—

"Martin's Infants' Preservative.

"The prescription submitted to me by Mr. Martin, ('Infants' Preservative,') is perfectly safe, and such as I am in the habit of prescribing. (Signed) John O'Donnell, M D."—"I have read the above prescription, and perfectly agree with Dr. O'Donnell that it is a safe medicine to be given to the youngest child. (Signed) Alexander Stookes, M.D., M.R.C. Physician, London. October 13, 1862." Sold in bottles at 7½d. and 1s. 1½d. each.

"A Magical Remedy.—'Guttæ Antiscrophulæ,' or Anti-Scorbutic Drops. —(From the recipe of Mr. Heys, Surgeon.)—I certify that the mixture, 'Guttæ Antiscrophulæ,' or Anti-Scorbutic Drops for scorbutic and scrofulous diseases, is free from any mercurial or arsenical ingredient, and is a safe and efficacious medicine in eruptive diseases of the skin, attended with debility, emaciation, and glandular enlargements, such as constantly come under my observation. (Signed) John Heys, M.R.C.S.L., 393, Scotland-road." In bottles, 1s. 6d. and 2s. 6d.

Army Medical Reform.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Being a regular subscriber to your valuable gazette, I was sorry to observe, in the number of the 5th inst., that, in your article on the "Army Medical Department," you offer your opinion in favour of promotion in that Department by "selection." I am sure, if you had any knowledge of the practical working of the "selection system," you would not have expressed an opinion in its favour, for it is altogether impossible to ascertain or conceive on what guiding principles that system is at present (or ever can be) carried out.

Selection does not advance the most deserving officers, but leads to jealousy, ill-feeling, and to a want of cordial and harmonious co-operation among the members of the Department, some of whom, under this system, endeavour (alas! for human nature) in every possible way to curry favour with their military superiors, and also fawn and impose upon the senior Medical officers under whom they serve, to the serious prejudice of their more deserving and more modest brother-officers. At present there is an unjust and discouraging uncertainty in regard to promotion, which is acting most injuriously both within and without the Department, and no young man will enter a service where his advancement is a lottery, dependent on the pleasure or caprice of a Medical chief, who may be often influenced by high military pressure. Promotion by seniority is the best course to be followed, and is the one observed in the Royal Marines, and in the scientific corps of the Artillery and Engineers.

In order to make the Army Medical service more popular, and to ensure a larger number of well-educated young men to enter it, I propose,—

1st. That promotion should take place strictly by seniority in all grades.

2nd. That the Director-General should select, but not promote officers for special service and extraordinary duties.

3rd. That a more liberal scale of pay and retirement should be granted to all grades.

4th. That no Assistant-Surgeon should serve beyond ten years in that rank.

5th. That the examination of Assistant-Surgeons for promotion should be abolished.

6th. That all Royal Warrants should be literally and faithfully carried out.

7th. That compulsory retirement at fifty-five years of age should be abolished.

8th. That a service of three years, in the senior grades, on full pay, should no longer be required to entitle an officer to the retiring allowance of his rank.

9th. That the highly obnoxious system of Surgeons being ordered to pay all the expenses of a rejected recruit should be done away with. No civilian Medical Practitioner is fined because he differs in opinion from another Practitioner.

10th. That Surgeons should no longer be required to furnish, at their own expense, surgical instruments for the use of the Army.

11th. That staff Medical officers should receive the same amount of leave of absence as regimental Medical officers.

12th. That all Medical officers holding the relative rank of "field officers" should receive forage as a rank allowance.

13th. That the present obnoxious forms of confidential reports on Medical officers (particularly those required from non-Medical officers) be abolished.

14th. That all officers moved from regiments to the staff, and from the staff to regiments, to suit the public convenience, should receive an allowance to cover the expenses of such an exchange.

15th. That the relative rank of Medical officers should be finally settled, to avoid bickerings and ill-feeling between them and their military brethren.

Military officers do not appear to grudge the relative rank enjoyed by those of the commissariat Department, who, though not Professional men, enjoy a higher rate of pay, retirement, and relative rank, than Medical officers. I trust the importance of the subject will be a sufficient apology for the length of this communication, and that you will continue to advocate the claims of a highly deserving, but not sufficiently appreciated class of officers. I am, &c.,

London, Sept. 17. A Sufferer for Many Years.

COMMUNICATIONS have been received from—

Ecce Homo; Quæro; Dr. A. E. Sansom; A. B. C.; A. R.; Veritas; Dr. George Taylor; Another First M.B.; Mr. J. P. O'Donovan; Mr. Charles Williams; One of the Profession; Dr. W. Watson Campbell; Mr. J. C. Mewburn; Privy Council Office; Dr. R. Dundas Thomson; Dr. Cholmeley; Dr. Eade; Mr. Nunn; Mr. G. G. Gascoyen; Mr. Robert C. Moon; Mr. Henry Lee; Mr. J. Priest; Dr. E. D. Dickson; Mr. C. F. Maunder; St. Thomas's Hospital; A Sufferer for many Years; Dr. J. G. Wilson; Mr. J. Zachariah Laurence; Mr. T. E. Amyot; Mr. F. Poole Lansdown; Mr. Hastings; Apothecaries' Hall; The Royal College of Physicians, Edinburgh; The Royal College of Surgeons, Edinburgh; Dr. Power; Mr. W. Copney; Mr. S. Highley; Mr. H. Obre.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 19, 1863.

BIRTHS.

Births of Boys, 946; Girls, 984; Total, 1930.

Average of 10 corresponding weeks, 1853-62, 1678·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	623	563	1186
Average of the ten years 1853-62	588·1	592·9	1181 0
Average corrected to increased population..	..	..	1147
Deaths of people above 90	..	2	2

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	1	1	11	1	4	10	3
North ..	618,210	16	6	32	5	2	10	13
Central ..	378,058	7	6	13	2	3	8	12
East	571,158	8	3	44	4	5	19	21
South ..	773,175	4	3	30	4	7	11	26
Total.. ..	2,803,989	36	19	130	16	21	59	75

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29 950 in.
Mean temperature	56·1°
Highest point of thermometer	71·8
Lowest point of thermometer	43·8
Mean-dew-point temperature	48·1
General direction of wind	S.W.
Whole amount of rain in the week	0·00 in.

APPOINTMENTS FOR THE WEEK.

September 26. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

28. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

29. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

30. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m. Middlesex, 1 p.m.; London, 2 p.m.

October 1. *Thursday.*

Operations at St. George's, 1 p.m; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

2. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

OPENING OF THE LONDON MEDICAL SCHOOLS.

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ST. BARTHOLOMEW'S HOSPITAL.

Mr. Paget delivered the Introductory Address. After making some preliminary remarks on the relation which the Hospital bears to the School, he said :—

It would be hard to conduct the necessary work of a large Hospital without the services of students, giving daily and hourly assistance in the wards; but, in another and much more important way, the presence of a large class of students serves the interests of a Hospital, and to-day may well remind us of it. For the 1st of October renews, every year, an honourable rivalry among the Medical Schools of England; to-day the Medical Officers of every Hospital that has a School pledge their reputations to a fair and open trial; to-day students are, in every such Hospital, invited to see through the whole year what is done by the whole Medical staff; and what they see they may make public; and what they make public will form a great part of the reputation, good or bad, of those who have charge of the sick. Therefore although to-day has, indeed, its prime interest for the Schools —that is, for teachers and students—yet it is scarcely less important for the patients of the Hospitals, in that it renews to them the annual assurance that all that is to be done for them will be done with those safest safeguards—publicity and competition.

Mr. Paget then proceeded to speak of what, he said, he considered the proper business of their meeting, namely, that of helping the students, if possible, to a prosperous career. It was needless, he said, to speak of the motives that may have led them to the choice of their profession; but it was enough that they were engaged in it, and that the engagement bound them, not only by consideration of their own interest, but by the weightiest responsibility to God and man, to do their duty in it with all their might. And keeping this in view, they should remind themselves that they proposed to take in hand the lives and welfare of their fellow-men; and they should think daily of what all this involves, and then they would decide that their own life must not be much dearer to them than the duties of their profession. Keeping plain principles of duty such as these in view, their profession would be a source of true happiness, and, in the best sense of the word, they would be successful. For, the lecturer added, by success and prosperity we must mean not only money-making, but the possession of a good social and professional station; the respect of wise and good men; the gratitude of those whom we serve; and, above all, at the close of life, a honourable consciousness of well-done duty. Before entering on the details of the work to be done, Mr. Paget said that the first and last means of success must be devotion to work, and that, on looking round, either on the men of his own time or on the histories of those who had gone, he saw, more and more clearly, every year, that the working men are the successful men. The only thing that deserves to be called work, or that is secure of success, is the work that makes us more able to prolong and comfort human life; and there is no calling in which the true success is, on the whole, more fairly proportioned to the true work than in our own.

Mr. Paget then spoke of the science and art of the Medical Profession, and laid special stress on the necessity of studying them together, and of not fancying that the science of Medicine must be first studied by itself before any attempt is made to lay upon it, or rather incorporate with it, the practical lessons to be learnt amongst the sick in the wards of the Hospital. It sounds very well, he said, that first must be laid the foundation of principles, and that then the superstructure of practice must be built upon it, and this would be right if Medicine were a perfect science, and if all practice had a scientific basis, and if it were a matter of necessity to study first one and then the other of the component science and art. But Medicine is a very imperfect science, and a great deal of good practice has no science at all in it, and there is no necessity to study one part of it before the other. On the other hand, they who have the best success are they who, from the first, spent some part of every day of their student lives in the personal study of the actual practice of their profession,—who daily see, and hear, and touch the signs of disease, and daily see the influence of remedies. This manner of studying should be more particularly carried out, not only because so much of good practice depended on the early education of the senses for the perception of those signs of disease which, to one who has attended to the science only of the Profession, are utterly imperceptible, but also because this education of sight, hearing, and touch, if not begun early in life, becomes more and more difficult with increasing age, and at last impossible. Mr. Paget illustrated this by speaking of the analogy between the education of the senses and that of the muscles; for in the same way that, with repeated well-directed efforts of the will, new movements are acquired, or greater precision, greater swiftness, or greater ease in those learned long ago; till, at last, the hand can certainly, and almost without effort, do such things as were before not merely difficult, but simply impossible; so with the senses. The case is just the same. The eye, which is practised and skilled, will discern expressions of disease—colours, and forms, and slight movements—which, to the unpractised, are invisible. The ear will detect sounds, as of the heart and of the breathing, in their finer modifications, which, to the beginner, are inaudible; and the hand will feel, with practice, such fine differences of sensation as are, at first, imperceptible, but yet may become as definite as any objects that are sensible even to the coarsest touch.

For the purpose therefore of acquiring this dexterity, as well with the senses as with the muscles, some part of every day should be spent in the wards or out-patients' rooms, or in both, and some additional time should be past in reading about what has been observed, and in recording some part of it. It is for these things especially that a large Hospital has very great advantages; for amongst the innumerable facts to be seen in it, there are at all times some of the highest and most attractive interest, and the less rare facts occur so frequently that they may be studied in every form, and become familiar to the student in all the varieties that they can present.

Mr. Paget then went on to speak of the intellectual discipline that was necessary for the gaining of a habit of observing and thinking accurately, and said, that, for this discipline, the subjects of study required by the examining boards were particularly well adapted. It is too commonly believed, he said, that the only use of anatomy, physiology, chemistry, and botany, as they are taught in Medical Schools, is in the facts that they supply, bearing directly on practice; and it is true that they do, all of them, contain very many facts of daily utility; but this is far from being their only, or their chief use as subjects of study. Their much greater value is as means of mental exercise in sciences, as means by which, while learning useful knowledge, students may be also learning how to observe and to think accurately in things appertaining to the living body, how to become, when they are their own masters, their own teachers also.

Mr. Paget then spoke of each of the subjects mentioned more in detail, and said—In Anatomy, while learning the construction which when impaired, it is our business to endeavour to restore, we can, more than in any other study, see with what effect the argument from purpose, use, and final cause can be employed in science. But its chief value for a scientific education is, that in it the most complex structure yet known is described with such precision and completeness, as is not equalled in the descriptive part of any other study. In thoroughly studying Anatomy students may see what in respect of accuracy and fulness ought to be their model in the study and record of disease; they may see what sharp and repeated scrutiny is requisite for a true insight into any organic structure, and may learn the method, the difficulty, and the worth of an exact description. A well-trained anatomist would never, one would think, be slovenly or superficial in his study, or in his record of facts.

Passing on to the consideration of the other subjects of study, Mr. Paget spoke first of Physiology, and especially of its great value in educating the mind to study pathology—the whole process of inquiry and of reasoning being the same in both. Indeed, the student of physiology can bring to his study of practice not only the store of facts with which, as with standards, everything that he observes must be measured, but the methods of investigation and of thinking which he must pursue in his researches, and the general laws with which his endeavours must be conformed.

In Botany, which, perhaps, stands only second to Anatomy in the accuracy and largeness of its descriptions, may be found the most perfect examples of classification yet attained in science, and the strictest use of terms. The mind, otherwise fit for science, which lacks the element of order, should be drilled in botany, of which, as well as of comparative anatomy, it is no little commendation that they may be the best scientific recreations of even the most active life in practice.

In Chemistry there is that which among all our studies approaches most nearly to the characters of an exact science; counting and weighing the very elements of which we are composed, and gradually unveiling the forces that combine them. This is, of all the branches of physical science, that which should most affect the course of our inquiries and reflections. It seems to offer more hopeful guidance than any other towards understanding the very nature of disease, and towards the detection of those highest unknown laws which we are too content to call the mysteries of life. After dwelling on this subject a little more fully, Mr. Paget said that the School of St. Bartholomew would lose this year some of the services of Dr. Frankland, who had given up a part of his lectureship, because, as he himself expressed it, he had an "earnest desire to devote a larger portion of his time to original research," a motive, Mr. Paget remarked, worthy of the worthily elected successor of Davy, Brande, and Faraday. But although, the lecturer added, it is impossible without regret to lose anything of the co-operation of so distinguished a colleague, yet with Dr. Odling for his associate in the chair, there is no question that everything by which chemistry can minister to Medical knowledge will be put within the student's reach.

It was no argument, Mr. Paget continued, against the study of these subjects, that many justly successful and distinguished men in the Medical Profession of the present day knew little or nothing about any of the sciences of which he had been speaking. They well studied them, but they long ago forgot them; and many more, of times past, knew or believed only what we now know or believe to be erroneous,—as erroneous as much of what we believe will be found to be by our successors. But this only proves that the chief value of these things is not in their direct instruction in what is useful, but in the mental exercise which they provide. And they must be learnt, at least in their first principles, now, and thoroughly; for, in all the facts which they supply for help in practice, there is no safety except in being accurate. Inaccurate anatomy, Mr. Paget said, is as bad as none,—it can only lead to error. Inaccurate chemistry is nearly as bad; and erroneous physiology has been at all times a most plausible and prolific parent of erroneous physic.

When once the mind has been disciplined by careful and exact study, its strength and pliancy may be maintained by continued exercise in whatever may be the chief pursuit of life. He who has studied the scientific part of his Profession need not, when in practice, continue to pursue pure science, or to study it with the same zeal, or at the same cost of time.

After a few more remarks, Mr. Paget said—It is only with mental strength and mental skill that real experience can be gained. Experience is of no natural growth—it is not commensurate with age; time will not mend the defects of early study. If a man has not begun to observe carefully before he is of age, and gained some skill both in observing and in reasoning upon his observations, before twenty-five, it is to be feared that he never will. After about thirty, wise men may grow wiser, but unwise men rarely grow wise; therefore there are many old men with no experience at all; at the right time of life they did not learn to learn, and ever since, though walking in the field of knowledge, working, it may be, as hard as other men, they have been gathering only weeds.

The experience of a well-educated man—of one educated in science—does not thus err. Its defects tend to the side of doubt and hesitation; but against these, the lecturer said, few men of the age of those whom he was addressing need be warned. To them, he continued, the advantages of good education would be unalloyed; with it they would get real experience, and with experience acquired in careful study and reflection they would gain the best security they could have, not only against the gross errors of a miserable credulity, into which men who are uneducated in natural sciences are prone to fall, but against many temptations to which the Medical Profession is peculiarly exposed.

Mr. Paget then spoke of the various temptations to which he alluded more in detail, such as displays of cleverness, hatred of progress, dishonesty, especially in the form of various degrees of quackery, pretensions of knowledge, etc., and summed up by saying that he had tried to give his hearers some guidance towards a really successful career. For this, in its broadest and best sense, the simple rule is devotion to duty, and a part of your duty, he said, will be constantly, and all your life long, so to work that you may be always gaining more skill in doing good, and this augmenting skill is to be gained by continual labour in the art and practice of your Profession, while yet, with steady observation, and with the calm and exercised reflections of well-educated men, you may be always increasing not only in knowledge but in mental power.

The burden of my address, Mr. Paget continued, is work, life-long work; and so it is, and so it must be; there is no true success without work, no happiness without it. A kind of success is possible without it, a getting of money without honour; and to this there are many ways; but we do not teach them here, and I am sure you are not seeking them. Young men do not lay plans for disreputable success in life, and, indeed, in the Medical Profession, very few probably do so, except those who have thrown away their chances of success by fair means.

But it may be asked, what is to be the reward of this? Is it likely to be anything fairly proportioned to the cost of life-long work? If money-making is to be the one or the chief object of work, the Medical Profession is not a very good one. Few even of those who work hard and work well in it, grow rich or gain wealth enough to rise in society, or to enjoy what some call independence; yet even in relation to money, the profession may be reckoned as having some advantages. It is singularly free from risk; if few grow rich, very few are ruined through any faults inherent in the profession. And, I believe it may be held that there are few, if any, callings in life, in which it is more certain that fitness and prudence in business will bring at last a fair competency of living. As much as this, the lecturer added, you may fully expect; a moderate competence, liable to very little risk, and requiring but little investment, that is of money. The investment to be made is that of brains and of strong will.

But it must be considered no small happiness to have a calling in which success can be reckoned by something else than money. Mere money-making is no evidence that a man has done anything respectable, or has gained anything at all worth his labour, and thence, probably, it is that the most honourable professions—those in which high-born and high-bred men most willingly engage, are those in which, for the most part, services are scarcely rewarded with money, or certainly not according to the scale which mere money-makers would think adequate.

But though not making money, men may, in the profession of Medicine, obtain that for which rich people, who want it, are ready enough to give their wealth, namely, a good social station and rank among gentlemen.

This rank may be certainly had without purchase and without subserviency. But whether men have it or not depends very much on the manner in which they study their profession.

After some more remarks on this subject, Mr. Paget said, for the exercise of the intellect, what profession can offer more opportunities? Great stores of knowledge already gathered in, but greater stores still to be gathered; and, among them, such as may satisfy every kind of intellect. Difficulties enough to satisfy the boldest; breadth of uncertainty such as the most speculative may find room to range in; occasion for experiment sufficient for the most ingenious; facts of plain value that ought to satiate the merest utilitarian; laws large enough for the most capacious; deep enough for the most profound.

The lecturer concluded in the following words—And for the exercise of virtue, our life is full of occasions, I had almost said of inducements to it. We live in the study of that which seems to us the most elaborate and most perfect of God's works, marvellous in its perfection, marvellous in the manner of its decay and final change; therefore, in our common tasks, we may cultivate an habitual reverence and homage, and may find constant aids to faith in the analogies between what we see of the earthly life and what, as revealed to us, we believe of the heavenly. We live among the suffering; and every one who needs our help may claim to be an object of our compassion, or may exercise our gentleness and patience. We live among the dying, and every day shows us, more plainly than it does to other men, the need of watchfulness and Christian prudence, and their reward in the final victory of faith.

Surely all these should be deemed great privileges, and the profession that offers them should be very highly esteemed, if we think how vast are the issues that will be decided by our conduct in this fragment, this poor beginning, of our endless life, and how much we allow our conduct to be affected by the circumstances among which we live.

Let me recount to you the good things that your profession freely offers:—Competency of living, the society of educated men, blessings from the poor, recompense and gratitude from the rich, boundless fields for intellectual exercise, access to the richest storehouses of knowledge "for the glory of the Creator and the relief of man's estate," inducements to the practice of the highest Christian virtues.

These are before you all, and their price is,—devotion to your duty.

CHARING-CROSS.

The Introductory Address was delivered by Mr. C. W. Heaton, the Lecturer on Chemistry to the School of Medicine. He commenced by remarking that there were many things which did not belong to any of the prescribed courses of study, which it was yet highly desirable for Medical students to hear at the commencement of their education. The 1st of October was a day which was an epoch in the career of all Medical men—one of those days which divide into two the brief span of our lives. The oldest and wisest felt it to be so, and so quite equally must those upon whom its sun had not yet set. In future years the students would look back to this day, either with pride as to the day which opened to them that career which had brought them comfort, independence, the grateful love and respect of their fellow-men; or with bitter shame, as they thought of wasted opportunities and mis-spent time.

The Lecturer remarked that the speaker on these occasions was usually a Medical man of high standing in his Profession. It was to such a one that the office most naturally belonged, for who could so well speak of the objects, hope, and difficulties of a Medical man's life, as one who had known them all—had fought through early trouble, and arrived safely at the goal. The Lecturer felt acutely that he had not this advantage; he was not a member of their Profession, and must not presume to speak of the technical details of a Medical man's life. But this very deprivation enabled him to speak more freely than he could otherwise have done of the deep and universal respect with which the members of the Profession were regarded by mankind. And well, indeed, was that respect earned! Apart from religion and its ministers, where could be found so noble a mission and so faithful a discharge of it? Medical men had good reason to pride themselves as they did on the unselfishness of their Profession. It was a rare thing to find a Doctor in whom the thought of saving life and lessening human pain was not paramount to all other considerations—even to that of fees. That the errand of mercy, the earnest endeavour, was not limited or measured by those fees, but that like God's rain it descended alike on the just and on the unjust—on the rich and on the poor. Mr. Heaton hoped and believed that this high character of the Profession would never be lost in his hearers' hands, but that in building up their fortunes the foundation-stones would be their duty towards God, and their duty towards their neighbour.

The students must not disguise from themselves at starting that their education would be a most difficult, complicated, and comprehensive one. Apart from technical knowledge, there were many things which no teaching and no reading could give, but which could only be acquired by patient study and self-restraint. They must be quick to read men's characters, must study their mental as well as physical infirmities. They must be prepared to humour their weaknesses, to keep their secrets, and to soften their fears. They would have to warn the sufferer of the near approach of death, and, as far as in them lay, to comfort the fatherless and widows in their affliction. The lecturer quoted an eloquent passage from Thackeray's "Pendennis," in which the solemnity of a Medical man's trust, and the intense anxiety with which his visit and his words are looked for, are strongly exhibited. Speaking of the unselfishness of Medical men, naturally led Mr. Heaton to condole with all his hearers on the recent death of the lamented Dr. Golding, who, as he reminded them, had been the first promoter, and for thirty years the mainstay of Charing-cross Hospital. For the whole of that time, in spite of numerous difficulties and constantly increasing ill-health, he had toiled on with his good work. Could he have had on earth a nobler reward than the thought that more than 350,000 human beings had had cause to bless his name?

In attempting to advise them as to their general conduct, the lecturer's task would be a simple one. A complete alteration had taken place in the Medical student within the last few years; and it was indeed scarcely possible to trace in the quiet and gentlemanly student of the present day any of those peculiarities which Charles Dickens and Albert Smith had made immortal. Those eminent naturalists had described him as a kind of wild animal. His hands were dirty and gloveless; a large stick protruded from his coat pocket; he had a contempt for clean linen, and an utter freedom from all trace of collar! He breakfasted on raw brandy and full-flavoured Cubas; he carved his name on the pew in church and made night hideous with his songs.

All this was gone by. All Medical students would reckon a man who did such things as a blackguard, and indeed we could hardly believe that some of those grave, well-conducted gentlemen who now alight from neat broughams at our doors, may have belonged in early life to such a wild, harum-scarum family. Much of this improvement was no doubt due to the higher education now expected in a Medical man. It was now almost a matter of necessity that a Medical man should be a gentleman, because the educational tests to which he was submitted could only be passed by those who had the education of a gentleman to fall back upon. All students of the present day must rejoice at the change, although it would debar them from the graceful pleasure of wrenching off door-knockers and other similar pastimes. On the other hand, there were plenty of good healthy amusements, which, so far from hindering the student, would enable him to work the harder. A good pull on the river, a ten-mile walk, or a stiffly-contested game at cricket, would send any man home to his work with braced fibres and cleared brain. The lecturer regretted to hear that the Hospital cricket club had not hitherto been very successful, and hoped that a new and cricket-loving generation might arise, and that they might hereafter be equally celebrated for the success of students in examinations, and for the long scores they made at cricket.

Turning to more important subjects, the students must remember that the one point upon which their whole future careers would depend was diligence. It was a hard, though a most essential lesson to learn. The continued attention to lectures was very monotonous, and the temptation to allow the thoughts to stray was very great, but if the habit were once acquired how valuable it would be! Everything which it was necessary for them to learn would be brought in succession before them, and, with trifling exceptions, nothing which was unnecessary. They must acquire the knowledge somehow, and if they followed all the lectures rigidly, and did not allow a single point to glide by them unperceived, their knowledge would grow up gradually and in a most firm and satisfactory manner. There were certain necessary drawbacks to all teaching by lecture. The first of these was the rapid succession of lectures on different subjects in one day. Students had complained that they had to rush from anatomy to chemistry at such a rate that the result was perhaps a curious jumble of metacarpal bones and sulphuric acid.

This, of course, could not be helped, but habit would do a good deal in getting over the difficulty. The other inconvenience was generally in the student's power to avoid. In a course of lectures there could generally be no repetition, and hence it often happened that when a student missed a lecture, he missed the key to a good deal of what followed, and many subsequent lectures became in consequence unintelligible to him. When the missing of a lecture was a rare thing, this might be remedied imperfectly by the student's carefully and immediately reading up the subject in his handbook, but how often was even this neglected?

This might be defined to be the best way of studying. Let the student attend *at* and *to* the lectures regularly. Let him, if possible, take notes—this, however, being to some men a matter of difficulty—and let him never neglect to read up in his handbook at the close of the day the subjects he has heard in it. The student might, if he pleased, adopt a different and a far inferior system. He might set at nought the prescribed divisions of study, and taking up vigorously with some one subject, might for a time neglect all others. Then he might discard his first love, and take to something else. The result of this system generally was, that by working harder than he need have done on a good system, he might succeed in getting a vague smattering of each subject in exchange for the clear and satisfactory knowledge which he might have had.

There was yet another plan. The student might set himself sedulously to work to learn nothing, and in that case he would probably be successful. He might shirk his lectures, waste his time when at them, and devise a thousand other means of preventing a ray of reason from penetrating the stolid darkness of his soul. These floating logs must drift on in their own way, and would, no doubt, arrive safely some day or other at the great sea of mediocrity. They always went to a grinder, and frequently succeeded ultimately in passing their examinations.

Mr. Heaton next proceeded to speak of the course of scientific study which was to occupy the greater part of the first year of the student's education. He remarked that it embraced Anatomy, Physiology, Chemistry, Botany, the Laws of Heat and Electricity, and some other branches of Physics, and Materia Medica. With the exception of the last, which might rather be regarded as an art than a science, these things constituted important branches of physical science.

Now, although science was only to be regarded primarily as a means to an end—although it was but one step towards the power of striving successfully against disease—yet it was in itself so great and noble a thing, that every thoughtful man should be thankful for the opportunity which forced him to make it in some measure his own.

"Physical science, in the sense in which we now use the term, may be almost said to have had its birth within the last few centuries; and its rapid progress since must ever stand as one of the most remarkable events in the history of man. How much of all modern progress may be traced to its influence, how closely are all our ideas interwoven with the truths it has taught us! In what other province of human intellect can we boast of anything like the progress it has made? We have no better historians than Thucydides and Tacitus; no poets better than Homer, Dante, and Shakespere; and Socrates, Plato, and Francis Bacon are not yet quite eclipsed as thinkers.

"In all of these things progress is well nigh impossible. No man can take up his ground where his predecessor had left it. The poet cannot master Shakespere, and straightway proceed to mount from that pinnacle to loftier heights. He must take his stand, like all others, at the bottom of the mountain; haply, indeed, if, in his life-long effort, he can attain to within sight of the giant peaks above.

"But in science it is all progress. The individual is nothing. The great mother Nature is all in all. One by one her votaries toil on, each contributing his petty inch or two to the constant advance, and each dying in his turn, only to give place to others who spring phœnix-like from his ashes. Who will dare to say where this mighty movement shall stop?"

If the study of science was pursued simply for utility and temporary convenience, it would, like other branches of study, be found dull and stupid. But if the student threw himself into it, and observed carefully the beauty and interest of what he was learning, he would not fail to find that he derived ever-increasing pleasure and satisfaction from it.

More than this might be hoped for. Every young Medical man should be in some way or other a scientific worker. Every one who had studied an art or science felt the desire to do something for its advancement, and what was to prevent this desire from being converted into action? It was a good thing to have a favourite pursuit, when it was a good one; and no man was ever more thoroughly happy than when indulging it. Then, in the early part of a Medical man's life, it so often happened that there was a good deal of time to spare. That interval—before the busy whirl of practice has commenced—is just the time for science. Let him take down his big books, and pull out his microscope, and set to work. The next few years of his life will pass quickly, happily, and profitably! If he does not join the body of those who have advanced the cause of science, he will at any rate find that he has advanced his own mind!

A perfect bond of union between all the sciences would be perceived as the student advanced. All sciences were but so many manifestations of the regular and harmonious workings of Nature, and yet in all there was a certain grand simplicity and uniformity of design. Certain constantly recurring facts there were, in which Nature appeared never to vary, and these, although we knew nothing of their cause, are distinguished as the "Laws of Nature." These laws should not be considered in the light of causes. Of causes, apart from the First Great Cause, we knew nothing. We did not "explain" anything by talking of the "law of cohesion," as determining the solidity of a lump of chalk. All we could do was reverently to trace the finger of God in the world He had made. We could then admire, as proofs of His love, the wonderful order and harmony which pervades that world.

These laws of nature were found to pervade all sciences alike.

Having studied chemical action, it was found that the assimilation of food by the plant, the formation of starch, sugar, and woody fibre, and of various acids and alkaloids, were all examples of it, and the same thing was true of geology, and even of astronomy, where chemical sway could hardly have been supposed to have extended. But this influence of various sciences upon one was most clearly seen in physiology.

The structure of the body was in accordance with the laws of mechanics; the eye was an optical, and the ear an acoustical instrument. The fluids passed the membranes in obedience to the laws of diffusion; and digestion, nutrition, and respiration were, however imperfectly understood, true chemical processes.

It was, indeed, a difficult, although very interesting branch of science; and yet, if some of the more enterprising of Medical students would but prepare themselves for the task, there would not be wanting many highly competent workers. In the opinion of the lecturer, the greatest advance was to be hoped for by the careful study of Chemistry in its relations to Physiology.

In spite of all the claims of science, the students must not forget that their great object was to become good doctors, not merely scientific men. A great distinction was to be drawn between the science of pathology and the art of healing. The former was yet in its infancy; the latter had attained to a most stately growth. Our wisest Medical men were constrained to admit that of the causes of disease and the nature of the action of the various medicines in use, they knew as yet but very little. Those causes were so infinitely various, complicated, and obscure, and the effects of the same treatment were subject to so many exceptions and anomalies, that it often happened that even the wisest could not predict the results of the system he was employing.

Some, but very little, progress had been made in deciphering the various problems of pathology, but we ought not to despair of further advance. With greater knowledge of physiology, and increased means of carrying on researches, more light would surely come.

One great instance of the advantage which modern science had conferred upon Medical practice was to be found in the increased attention now paid to the two essential conditions of life—air and water. The knowledge that air abnormally loaded with carbonic acid is injurious to life had produced greater attention to ventilation, and similar knowledge had caused drainage to be regarded as a *sine quâ non*. The knowledge how much the salubrity of water depends on the amount of organic matter it contains had taught the Doctor to look to the analysis of the water in his district as an indication of the amount of epidemic disease which he would be likely to meet with.

This improvement was constantly progressing. We could no longer look, as Pope did,—

> "To where Fleet ditch, with disemboguing streams,
> Rolls the large tribute of dead dogs to Thames."

The Thames itself was being purified, and optimists told us that the time was coming when the stranger would come from afar to London-bridge to slake his thirst with the clear, pellucid waters of the ancient river!

The great guide of all Medical men was experience. Not that precedent was to be regarded as a sure and unerring guide. On the contrary, the opinion of a Medical man of genius was a composite thing, formed upon a thousand small points, which yet conduced in an important degree to a correct judgment upon the case. The conduct of a difficult case by a first-rate Medical man had, indeed, something in it almost poetical. As he watched it from day to day, noting every little thing which might tell for or against him by a power that seemed like intuition, his opinion slowly grew up, he himself, perhaps, hardly knowing how. And then, when the time for action had at length come, the decisive operation was performed with unflinching heart and quiet, steady hand; the knife, as though instinct with the strong nerves of the operator, doing just what was required, and no more.

A too rigid adherence to precedent still characterised some of the members of the Profession. It was perhaps a safer error than the reckless love of hypothesis and unbased theory which guided others. The mean was well expressed by Tennyson,—

"Not clinging to some ancient saw,
Not mastered by some modern term,
Nor swift, nor slow to change, but firm,
And in its season bring the law."

The lecturer then dwelt on the mysterious connexion existing between the body and the mind, and the important questions to Medical men which spring from its consideration. The consciousness seemed to be for the present bound up with the frail tenement of flesh, and the cessation of the peculiar chemical and physical actions which constituted animal life appeared to involve the arrest of the operation of the mind. The real knowledge which could be gleaned on this interesting subject was confined to certain practical guides to conduct, deduced from its careful study. Some of the great unsettled problems of the day, such as the obscure question of moral accountability, were affected by these psychological studies.

The lecturer concluded by assuring the students that their future success and happiness would ever be cordially welcomed by their teachers, and by hoping that in their future lives they would always have good cause to look back with pleasure on the period they spent at Charing-cross Hospital.

ST. GEORGE'S HOSPITAL.

The Introductory Lecture was delivered by Mr. Henry Lee. After a discourse of much interest, the Lecture was concluded with the following remarks :—

The study of Physiology teaches us that every part of a living being has its own independent vitality, so that a portion of a body, as for instance a tooth or a testicle, may be entirely separated from its connections, and may become united again to another living being, and may there form permanent and intimate relations. Each part has its natural period of development, growth, persistence, and decay. Each is, in the natural process of nutrition, constantly being renewed. Some material is being taken away, and some fresh matter is being added; but during this process the part remains the same, and retains its individuality. We recognise the same hand or face that we knew twenty years ago, although it may have no particle of its former structure. Each part, formed on the matrix of that which preceded it, partakes of its nature, although it may be endued with very different degrees of vital power.

Now, as in natural, so in political and social constitutions, the aggregate of the different living members constitutes the life of the whole. And a corporate body may remain the same, although its individual constituents are from time to time changed. We lived in our ancestors as they will survive in us. Thus constituted, societies in some sense are without death; and this feeling of our being in some way united to our predecessors, has led many learned societies to devote a day to the commemoration of their deceased benefactors. For it is a part of natural piety to decorate the memories of those to whom we can no longer grant any other recompense. Among those who have raised this School and Hospital to eminence, what heart beats not at the name of Hunter—that great and celebrated name, a name that will ever keep this School famous in the record of our profession.

It may indeed be called,

"—— Clarum et venerabile nomen,
Gentibus, et multum nostræ quod proderat" *arti.*

He, above all, was destined to recover the before lost method of Hippocrates, by which, without theory, and out of an individual experience, the forms of knowledge revealed themselves. At the same time he taught us that experiments alone, without an enlightened observation, could not advance knowledge. They might amuse for a time, but then pass off the scene, and leave no trace behind. But with him this observation directed and substantiated the course of every experiment. And yet he observed the forms of external Nature as if she had been then for the first time noticed and attended to; and he related what he had seen without mixing *himself* up in it.

Thus in Hunter were fulfilled the double, and hitherto supposed opposite requirements of the greatest philosophic mind, in every effort of which progression and development are manifest. I shall not attempt to say more on so illustrious a theme, which has been so often better handled than in this my humble attempt; but I will affirm that in Hunter, his art was a sacred thing, not a means to an end, but as the completest test of genius—the end itself.

Nor was he ever diverted from prosecuting and proclaiming knowledge by that golden ball which was once thrown before Atalanta, and has ever since let and hindered the course of those men who have stooped to pick it up.

But, alas! we have one nearer to us to lament, worthy indeed of his great forerunner, on whose shoulders exalted, Brodie seemed even to see further than his great master himself. Identified with us in this present scene, which of us does not mourn his irreparable loss? His monument, like that of Sir Christopher Wren, is around us. All things speak here of that great spirit which has been withdrawn from us, not prematurely, indeed, but in the ripeness of his assured fame. He is, indeed, worthy of our grateful remembrance, because he did not live for himself, and in dying he did not forget the old scene of his labours and triumphs.

During the last day that he completed here, he held a conversation on Medical affairs with the friend and companion of his riper years, Mr. Charles Hawkins, under whose auspices we may shortly expect a complete, revised, and enlarged edition of the whole of Sir B. Brodie's works; and the subject upon which Sir Benjamin dwelt with peculiar interest in that, perhaps his last conversation, was the success of the Medical School of St. George's Hospital.

He lives! his spirit lives among us, not only as represented by those who were the early companions of his labours, his first pupils, and his attached friends, but by his son. The present Sir Benjamin Brodie has continued for our benefit the annual prize instituted by his father for the advancement of Clinical Surgery (a prize given in order to "illustrate by example," as I conceive, the principles which the late Sir B. Brodie had so long taught from this place), and he has very recently given to this Hospital a series of beautiful drawings, a faithful record of those early labours upon which his father's reputation was destined to be founded, and has thus shown his wish to perpetuate, as much as in him lay, not the name only, but the present living influences of our departed friend.

The abilities, the industry, the influence of Brodie were employed without interruption to the last hour of his prolonged life to extend the benefits as well as increase the knowledge of our common Profession. These were his ends, and for their attainment, at that time when a love of ease creeps over most minds, he

"Scorned delights, and lived laborious days."

Let his successors read his works, not only as printed in books, but as recorded in our museum—a museum founded upon Sir B. Brodie's private collection—and consider that they were not undertaken merely to gain fame for himself, but to give solid instruction to others. Let them reflect that their progress in knowledge will make it either their glory or their reproach that they have studied in the school of Hunter and of Brodie. If we then value the name of one who has done so much for the interests of our common Profession, let us hear him speak to us once again in his own truthful, unadorned, but powerful language:—

"You are entering"—I once heard him say, and I noted the words—"upon a Profession which is good or bad according to the manner in which it is pursued. Let me offer you some suggestions as to your conduct in it. On no occasion allow anything to interfere with the strict performance of your Professional duties. Whatever you undertake to do, that do to the very best of your ability, sparing neither thought nor trouble, whether it be in the case of the poor man to whom you give gratuitous assistance, or of the rich man who remunerates you liberally for your attentions. Consider yourselves as being engaged, not in a trade, but in the cultivation of a noble and interesting science. Let it be your first object to deserve and obtain the good opinion of all classes of society with whom you come in contact, not only as being skilful practitioners, but as men of honour and integrity. You will thus be in that independent situation which will place you above the caprice of the foolish, and also above the necessity of stooping to obtain the favour of any individual. Do justice to others, but do justice also to your Profession and to yourselves, always bearing in mind that those who are in any way usefully and worthily employed have a much higher place in the scale of existence than those useless and selfish persons who live only for themselves, however high their rank, however large their fortune."

GUY'S HOSPITAL.

Dr. Pavy, of Bedford-place, Russell-square, delivered the Introductory Address at the opening of the Medical School of Guy's Hospital yesterday afternoon. He commenced by saying:—

The same—yes, the same old garment come round for wear again. Year after year, and for how many years past, had it not been regularly brought forward and placed upon somebody's shoulders. In use so long, not a particle of it remained that had not long since been worn quite threadbare. It had been turned and re-turned, and every fresh part in its turn had been picked out and put foremost until all freshness had been extracted from it. The garment had this year been placed on his back, and he must endeavour to make the best appearance with it he could. To begin, he must tell the students that he did not intend to take them far from their everyday life in what he was going to say. There would be ample room to engage—he hoped profitably to engage—their attention during the time he could reasonably ask them to allow him. If, on proceeding along his course he should happen to tread on anyone's corns, he could only say he should be sorry for it, but there ought by rights to be no corns to tread upon. (Laughter.) As students they must place a high value on their time. Covetousness as a rule was a hateful quality for a person to possess, but with time it might be said that it was a virtue to be covetous. His time was everything to the student, and it behoved him to see that it was turned to profitable account. It was always gliding so rapidly and imperceptibly along that it was necessary for him to grasp it with eagerness and determination in order to succeed in bringing it into his service. There was something melancholy in the picture drawn by the great Dr. Johnson in saying about time that when we had deducted all that was absorbed in sleep, all that was inevitably appropriated to the demands of nature, or irresistibly engrossed by the tyranny of custom, all that passed in regulating the superficial decorations of life, or was given up in the reciprocations of civility to the disposal of others, all that was torn from us by the violence of disease, or stolen imperceptibly away by lassitude and languor, we should find that part of our duration very small of which we could truly call ourselves masters, or which we could spend wholly at our own choice. Students therefore should be constantly on their guard; they would be constantly beset by thieves striving to rob them of their time. Let them beware of Thief No. 1—Sleep. Sleep kept them in their beds; they were not up sufficiently early to attend their nine o'clock anatomical lecture, or, if they did put in an attendance, they did not arrive until it was half over. Such half-price attendance—as they called it—what was it? A conscience-offering. Their principle of industry was not sufficiently strong to bring them to lecture in time, and their conscience would not allow them to remain away altogether. Under these circumstances they took a middle course, which was of little or no good to themselves, and led to the disturbance of others. If they rose late, they might depend upon it they would find themselves behindhand all day. They allowed sleep to rob them in the daytime, the evening might find them napping over their books, or they might be caught—yes, even so—nodding at lecture. Resolution, my friends, said the lecturer, the influence of Morpheus may be strong, but your will, if you choose to exercise it, is stronger still. Thief No. 2 was Idleness. There were those amongst the students who came there almost exploding with eagerness at first for work. They were scrupulously punctual in attending every lecture—lectures amongst the rest that they had no need of at present. They rendered themselves conspicuous in the dissecting-room, and bustled about in the museum over their "bones." They were foremost amongst the students in going round the wards, and were to be seen at all operations. They had stocked their rooms with books, and altogether it would seem as though they meant that the whole of their comrades should be eclipsed. But, alas! in many of these cases the fire had been too strong to burn long. This excessive ardour vanished as the charm of novelty wore away. Such men soon began to make themselves scarce in places where they ought still to be seen, and unless aroused by the chain of circumstances, might ultimately sink into the position—he was going to say, and why should he not say it?—the deplorable position—of idle men. Let them not, then, be over eager at first, for they might be disappointed on finding that their eagerness did not last. Beginning quietly, they would have an opportunity of looking round them, and applying themselves in the most advantageous manner to work. Steadily advancing, they would, day by day, strengthen their resolution, until ultimately they became, both by habit and taste, industrious men. Thief No. 3 was the solicitation of friends. Save the student from his friends if they happened to be idle men. Those who would not work were not content with doing nothing themselves, but preyed upon the time of others. They were just going into lecture perhaps, or had just sat down to study, when their friend dropped in upon them with an "I say, old fellow, come, put that aside; it's all serene; there's plenty of time; you can do it by and by." Resist, and they would make themselves safe from future attack. Yield, and they would very soon see their robber again. The lecturer pointed out in felicitous language that there was no royal road to learning, and though geniuses might occasionally spring up amongst them, a genius had to work like others. Their studies had all been planned for them by the examining boards, and they would have no difficulty in discovering what course they were to pursue. The lecturer defended the prize system which prevailed in the School, spoke of the strong kind of freemasonry which existed amongst Guy's men, expressed the deep regret which all connected with the Hospital had felt at the departure of Dr. Odling, and then concluded with some remarks on the important subject of vivisection, which has lately excited much attention. He said—The point that I am now about to touch upon is one which has recently attracted a great deal of public attention, and in connection with which the gauntlet has been so pointedly thrown down to physiologists, that it might be interpreted as evidence of weakness on our side if we did not take it up, and this is as fitting an occasion as any for the purpose. The matter I refer to is that of vivisection. Happily for society, it may be taken as admitted, that in every well-regulated mind a feeling of horror is experienced at the unnecessary infliction of pain upon any animal being. Now, there exists in our metropolis a society composed of benevolent and well-meaning persons, who have specially espoused the cause of the lower animals, and have doubtless effected the prevention of an immeasurable amount of suffering amongst them. Latterly this Society, looking upon any infliction of pain as unjustified, has been exerting its influence towards repressing the performance of experiments upon living animals for physiological or surgical purposes, and there are few who will not admit that room has here existed for their interference. But, because the scenes that have been described of the suffering that has been occasioned for the mere purpose of acquiring dexterity in operative veterinary Surgery, which could just as well be effected upon the dead as upon the living animal—because these scenes have justly excited popular indignation, are all operations upon living animals to be placed in the same category, and denounced as reprehensible? Are those who undertake operations purely for the advancement of science and the benefit of the community to be held up to public odium for doing so? Gentlemen, I belong myself to the class of experimental physiologists, and I am not afraid or ashamed to admit it, for I am ready to justify and defend my course. It is no argument to say that suffering, and often great suffering is occasioned from the pursuit of many of the sports which the gentlemen of England engage in as a pastime or amusement, and why is there no popular outcry against this? I willingly grant that one evil being left untouched affords no justification for the existence of another. My argument rests upon a totally different foundation to this; I accept the challenge that has been thrown down, and I am prepared to meet the denunciators of experimental physiology upon their own ground. It cannot truthfully be denied that the knowledge which has been acquired through physiology has not been the means of placing us in a position for averting premature death and alleviating the sufferings of humanity. It will suffice for me to mention the arteries, and is there any one who will confront me and tell me that Surgery from the information supplied to Physiology has not, over and over again, averted impending death, and mitigated an immense amount of suffering? If Physiology, then, can be shown to have already done this, is it not fair to presume that it remains capable of doing more? Now, are these anti-vivisection agitators prepared to take upon themselves the responsibility of restricting the progress of science and defeating the efforts which are being directed towards enlarging our sphere of usefulness in affording relief to the sufferings of humanity. Let these persons picture to themselves the mourning and distress occasioned by the premature removal of a husband and father —the grief at the untimely loss of a wife or a child, and say if they are prepared to incur the responsibility of frustrating the attempts to lessen these calamities, for such, and much bodily suffering besides, have oftentimes been averted by the aid that Physiology has already given to Medicine and Surgery. Have these persons so far espoused the cause of the lower animals—have they so far allowed their feelings to get the better of their judgment as to deny to their own species the benefits that may reasonably be expected to arise out of extended physiological research? Upon which side, I would ask, does the greatest infliction of suffering lie, and especially when it is taken into consideration that in by far the majority of experiments agents can be, and are, used for deadening the sensibility, and thus allowing the operation to be performed without the production of pain. Happily for us, our forefathers have not allowed the policy to reign that is advocated now. Gentlemen, I love the lower creatures, but I love my fellow species more. It gives me pain to witness suffering in any living being, and carefully in my experiments have I weighed the advantages likely to accrue from their performance. But in what I have done I have conscientiously felt that I have been acting in the discharge of a duty for the benefit of the community, and I hope that no maudlin spirit of philanthropy will in future deter me from continuing such a course. Let us all, gentlemen, no matter in whatsoever position we may be placed, fearlessly discharge, to the best of our ability, that which we conscientiously believe to be our duty, and we can then have nothing to be ashamed of. Let us all have occasion to feel that we are employing, to the best of our judgment, for the benefit of the whole community, the gifts which Nature has bestowed upon us, and which place us at the head of the creation. (Cheers.)

KING'S COLLEGE.

THE Introductory Address at this Institution was delivered on Thursday evening, October 1st, by A. B. Garrod, M.D., F.R.S., Physician to King's College Hospital.

Dr. Garrod, after a few preliminary remarks, proceeded to speak of the object of an Introductory Address, which he considered to be to point out to the Medical Student, more especially at the commencement of his career, the nature of the Profession he had selected, its advantages and disadvantages, the character of the various studies he would have to pursue, the difficulties to be encountered, and the shoals to be avoided. The Profession of Medicine he regarded as one of the noblest which could engage the attention of man, having for its end the alleviation of human suffering and the cure of disease. Furthermore, it is one which, when properly pursued, necessitates an acquaintance with many other sciences, the study of which, to an intellectual mind, must be in itself a source of the greatest pleasure. In this respect Dr. Garrod considered that the Profession of Medicine stood pre-eminent.

It has often been urged that the highest honours of the State are not gained, that large fortunes are seldom made by the practice of Medicine, still nearly all are enabled to obtain a fair competence, some even affluence; besides which, the greatest success in the Profession must not be measured by its mere pecuniary rewards.

Dr. Garrod then proceeded to speak of the studies and acquirements necessary to enable any one to carry out the practice of his Profession with satisfaction and honour to himself, and with advantage to those who might be under his charge; and first of preliminary education. At the present time all the principal examining bodies demanded of the Medical Student a proof of the possession of a certain amount of erudition before being allowed to present himself for examination in subjects more strictly professional.

These preliminary requirements would doubtless not only exercise a beneficial influence upon the status of the Profession, but likewise enable the student more readily to grapple with the difficulties he would have to encounter in studies strictly Medical. At the same time, they involve a certain amount of previous mental discipline and training. Dr. Garrod then spoke of the more important sciences immediately in connexion with the study of Medicine and Surgery. All would allow that a thorough knowledge of Anatomy is absolutely essential to the Medical man, and that its study has also the advantage of disciplining the mind and engendering precision of thought. Physiology is equally indispensable to the Physician and Surgeon, and without its aid the phenomena of disease would be altogether unintelligible. Dr. Garrod instanced that form of disease called facial paralysis, and showed how all its features might be perfectly explained, provided we had even what would now be considered a most elementary acquaintance with the functions of the nervous system; but that without such knowledge the affection would be most perplexing and apparently of the gravest danger. He then went on to review the advantages which Chemistry had conferred on the study of Anatomy, Physiology, Materia Medica, and all the departments of Clinical Medicine. Speaking of the rapid strides it had itself made, and the stimulus which had been communicated by it to the other sciences, he instanced several examples of the value of a chemical investigation of the functions of the healthy body—as the function of respiration, the renal function—showing that by a proper quantitative examination of the secretions from the kidneys, and the chemical estimation of some of its more important proximate principles, a clue could be obtained to the changes going on in the system at large. Dr. Garrod also spoke of the extreme importance of an accurate knowledge of the chemistry of the food, in reference to the proper nutrition of the body both in health and disease. Botany also was a science not to be neglected; physiological Botany was useful as enabling us to complete the series of relations between inorganic matter and animal life, and, by the aid of systematic Botany, we are often enabled to determine by mere structure alone the nature of the important principles contained in a plant, and thus obtain a clue to its action on the system, and its value as a remedy in disease. Dr. Garrod afterwards alluded to Comparative Anatomy and Physiology, and their great importance in connexion with human physiology and pathology. By the aid of these sciences we are often enabled to elucidate the value of certain structures in the human subject, and of the functions of many organs. Lastly, among the preliminary Medical studies he spoke of Materia Medica, defined its real boundary, and how it should be studied by the student of Medicine, in contradistinction to one of pharmacy only. He referred to the forthcoming British Pharmacopœia, and the advantages which would accrue to the Profession from the union of the existing Pharmacopœias of the three kingdoms into one national work.

Having reviewed the subjects necessary to enable the student to commence the real investigation of disease, Dr. Garrod passed on to the consideration of Medicine and Surgery when studied in the lecture-room, but more especially at the bedside of the patient. He affirmed that the preliminary subjects, although useful as aids, were in themselves quite inadequate to teach Medicine; that Medicine was as independent a science as any other; that disease had its own data, which must be carefully observed and recorded, and that from these data laws might be arrived at by the same processes of reasoning as obtain in other subjects. He, however, fully admitted that the value of the data obtained from careful observation depended greatly upon the amount of knowledge which was brought to play upon them, and that thus by the aid of chemistry, physiology, and other sciences, new facts could be elicited; and hence the Physician who in his early career has thoroughly devoted himself to the acquirement of such knowledge, must be far better prepared for the successful investigation of the phenomena of disease than he who is deficient in such information.

Dr. Garrod then dwelt upon the fact, which he felt should be openly and frankly confessed, that Therapeutics is far in arrear of Pathology; to some extent this is inevitable, as, for the successful treatment of a case, it is first necessary to understand its nature; but, independently of this, clinical therapeutics had not been so carefully or diligently studied as pathology; and this want of advancement had given rise to much mischief, and had favoured the promulgation of various systems of quackery, many of them most absurd and even outrageous to common sense.

Dr. Garrod then proceeded to speak of the method which should be pursued in studying the treatment of disease, and expressed a hope that ere long we should have good ground for congratulation on this subject. That medicines have great power in combatting morbid action, must be apparent to any one who has paid the least attention to the subject, and, on the other hand, that the natural progress of disease is not always easily diverted, is equally patent; still, the expectant plan of treatment, so much in vogue on the Continent, and which has recently influenced some of the Medical Profession in this country, although most valuable as a means of obtaining data in the natural history of disease, is certainly not the one most conducive to the welfare of the patient. Already the clinical study of therapeutics, by the aid of modern methods of investigation, has done much, if not in the discovery of new modes of treatment, at least in at once demonstrating the value of those which accident had arrived at, and which otherwise would have required the experience of many years to confirm.

Dr. Garrod then endeavoured to show that although the sciences in connexion with Medicine, and even Medicine itself, are rapidly progressing, yet the difficulties which the student has to encounter are not necessarily increased, for as a science advances and facts multiply, generalisations take place, laws are discovered, and the whole reduced to greater simplicity. In conclusion, Dr. Garrod impressed upon the student the absolute necessity of hard work in order to become eminent or even successful in his Profession; no superiority of intellect, nor the possession of the so-called genius could make up, he affirmed, for want of industry. He then alluded to the impression abroad that the study of some of the sciences in close connexion with Medicine, more especially physiology, had a tendency to engender infidelity; he asserted that this circumstance could only arise from taking a narrow view of the subject, from regarding man as a mere animal, only a little higher than the brute, from measuring him by his material organisation, and regarding his higher faculties simply as products of such organisation. Were this correct, he would indeed be helpless, yet "Man is the undisputed lord of the creation." To explain this elevated position, we have proof obtained from higher sources, and more convincing evidence than can be derived from the study of matter, that man possesses, what has been denied to other animals, the "Breath of Life,"—an immortal soul which assures him that his existence will not terminate with the dissolution of his corporeal frame.

THE LONDON HOSPITAL.

Mr. Maunder delivered the Introductory Address in this Hospital, and commenced thus:—

"Gentlemen,—This day, the first of October, is one of peculiar interest to the Medical Profession in this country. It is an occasion on which all ranks of our order assemble to inaugurate a new session. Old and young meet together on the same benches, the former to shake hands with old friends and fellow-students, to chat over the pleasurable recollections of earlier days, and possibly to introduce a son to the well-remembered walls; the latter full of hopes and fears, freed from the discipline of school, and eager to commence the great work of life. . . . . "

Having offered a hearty welcome to all, he assured the junior members of his audience, that every assistance would be given by his colleagues and himself to those who earnestly desired to store up that fund of information which is to be the groundwork of future practice. He urged them to believe that the Profession of Medicine demands of its disciples great labour, both mental and physical, and the exercise of the highest moral qualities—that the preparation for it was by no means agreeable, and the practice of it often disheartening. On the other hand, the Profession is a truly worthy and beneficent calling, ensuring to the industrious an honourable competence, and affording a consolation, amidst its various trials, in the ever-recurring knowledge of the fact that the honest exercise of our vocation tends to soothe and alleviate human suffering, and to elevate our own natures. . . .

In reference to subjects for study, the student should give a fair share of time to each, "lest to neglect one would be to imperil his success in all. . . . Let him take Method as his guide, and joining with her industry and perseverance, he will find that, instead of clashing with each other, each branch of learning will serve to forward and elucidate the rest. . ."

"But mere abstract study is not enough. The faculty of Observation must be highly cultivated, and results thus obtained must be referred to the mind, there to be elaborated, so that from the crude substance of *facts* may be educed essential *principles*. Knowledge painfully and laboriously obtained, fought for, as it were, inch by inch, conquered and made your own, is worth whole volumes of theory, though you had them all at your fingers' ends, and could repeat them as readily as your multiplication table. . . . In conducting an operation, the eye is often of little use in guiding the hand of the operator; he must call to his use a faculty—Creative Memory —which will depict for him the exact state of things beneath the surface of the skin,—lay bare to him the position of the parts, both as they ought to be and as they now are, in consequence of the injury sustained. . . . By thus bringing the memory to bear upon cases where the eye is comparatively useless, the intelligent Practitioner, from slight superficial indications, should be able to detect what lies below with unerring accuracy, and proceed as unhesitatingly to his work as if the hidden field of his operations lay spread out before his gaze. . . ."

Of Recreation—"It is as needful to recruit the strength of the mind by light and instructive reading and by innocent amusements, as that of the body by rest and manly exercises, and I know not how these can be better attained than by a run in the country (with a book under your arm, if you please), even though it be only for a few hours at a time. To further this view, I am an advocate for regarding Saturday as a *dies non* in the Hospital calendar. . . The acquisition of Professional knowledge *alone* is not sufficient to qualify you to play a satisfactory part on the stage of life. You will be brought into contact with all classes of society, and should therefore give the time allotted to mental recreation to the acquisition of *general* literature, that your conversation may be instructive and agreeable, and your company desired. . . . I would also strongly advise you to cultivate some non-Professional pursuit, some one or more of the collateral sciences. Such knowledge will always be a source of pleasure, and may become of pecuniary importance to its possessor. . . . A character for general intelligence will tend rather to promote than to impede success. . . . It will also afford agreeable occupation in retirement,

> "When years no more of active life retain,
> 'Tis youth renewed to laugh them o'er again"

The lecturer then advised those who had the means to travel before settling. "To one a sojourn in one or more of the European capitals would be attended by pleasure, and, if properly used, by profit also. By a careful apportioning of time all objects of interest to a stranger in a place, as well as the Hospitals and School of Medicine, could be visited, and the practice of our foreign brethren be observed; to another a voyage in Medical charge on board ship would commend itself; to a third the post of Medical attendant on a nobleman travelling either at home or abroad might be agreeable; while a fourth may select for his path in life, and await his opportunities for travel, one of the two services."

Besides being well-informed, "the Medical Practitioner should be a gentleman in every sense of the word. Let him cultivate easy and agreeable manners, which are quite compatible with sincerity, and avoid any eccentricity either of dress or otherwise which may offend society. . . . . He should be kind and courteous to his patients, but withal *independent*, never forgetting that he who possesses no self-respect has no right to exact respect from others. That the Profession be respected it is absolutely necessary that its members respect the prejudices and opinions of each other; be careful therefore how by word or even by gesture you undervalue the opinion expressed or treatment adopted by a brother Practitioner, either to a patient or to his friends. . . That Doctors have differed in opinion . . is certain . . but that axiom is no argument against the exercise of 'charity.' . . . Let me beg of you to exercise this virtue on all occasions (towards a brother Practitioner). . ." Mr. Maunder also said, "the very object of our vocation—truth—demands that we be honest," and proceeded to refer "to the distinction between Physician and Surgeon,—the 'pure' Physician and the 'pure' Surgeon; the Hospital Physician and the Hospital Surgeon. What is meant by the term 'pure?' It implies, I presume, that the individual purports to practise either Medicine or Surgery *only*, and, to qualify himself to take a high walk in his Profession, all his abilities are concentrated upon the study of the one branch without a commensurate and progressive knowledge of the other. It is true that during the first years of his Professional life he has studied Medicine and Surgery equally, but his Hospital appointment compels him to give the preference to one or the other; and thus, while his opinion is valuable in the one case, it is of little worth in the other; and it is upon these grounds that I hold the Physician to be unqualified to give a sound opinion in a Surgical case, and the Surgeon to be incompetent to take a right view of a Medical case. Gentlemen, I am of opinion that the Consulting Physician or the Consulting Surgeon who takes all fish that come to the net, who considers all patients that can pay a fee as belonging to his specialty, does a great injustice both to the patient and to his brother Practitioner, to whom custom and education assign the care of individual cases. It appears to be sufficient for a Medical man to be thought clever, no matter whether he be Physician or Surgeon, and the public is eager to consult him in every imaginable case. Such a step taken by an individual without the advice of his usual Medical attendant is consequent on unavoidable ignorance, but are we take advantage of this ignorance and perhaps jeopardise the health and life of a fellow-creature? Certainly not. It is our duty to refer the patient to the right man to exercise those qualities which the practice of our Profession teaches—benevolence and charity. It will perhaps be said that it is useless to expose an evil without having a remedy to meet it. The antidote is in the grasp of the individual Practitioner, and its application too. There is possibly one means, the only one that has occurred to me by which the public may be assisted in the selection of a Physician or Surgeon—it is that the Consulting Surgeon should emphatically declare his calling by replacing the Mr. or Mister, now before his name, by the word 'Surgeon,' both on his door-plate and private card. This peculiarity will probably give rise to discussions and inquiries amongst the public, my object may be slowly attained, and the moral courage of individual Practitioners in refusing a fee will be less often tested. In Dublin it is usual to see on the door-plate "Surgeon" So-and-So, why should not the example be followed in this metropolis? . . . .

Referring to the conduct of the authorities towards the Army Medical Department, he said—"Such treatment is unjust, and such policy shortsighted. Were it not for the Medical Department of the army, the force would be very differently constituted. Instead of being composed of men remarkable for their physique, it would soon become a mere sickly horde, inefficient in the field, and uselessly expensive to the country. It is surprising, too, that the combatant officers are unwilling to promote the advancement of their Medical brethren. Do not their health and life depend often upon the knowledge and skill of the Surgeon, whether exercised in peace or in war: . . . and since it is evident that the Medical Department of the army does not receive that consideration from the Government which is its due, it is my duty to advise you to become fully acquainted with the precise relation of the Medical Department to the other branches before you enter the Service as an Assistant-Surgeon."

Of Prizes—"I am happy to say only two, and those for general proficiency, are awarded to the meritorious student of this Hospital, . . but his zeal will not go unrewarded; he will have the opportunity of acquiring that practical insight into his Profession which is the *summum bonum* of his labours without extra fee; he may become Clinical Clerk, House-Surgeon, etc.; and who will tell me that knowledge thus acquired will not be of infinitely greater value to a man in after life than gold medals in elegant morocco cases, or certificates of merit handsomely framed and glazed. . . . I have asked you to exercise benevolence towards suffering humanity, but must warn you against indiscriminate charity, and here I allude to the practice of giving advice *gratis* to all comers, adopted by many Medical men at their own private residences. I shall perhaps be told that a desire to do good, or at least an anxiety on the part of the Practitioner to be afforded opportunities of acquiring knowledge from an extended field of observation, such as the limits of private practice do not yield, induces such conduct, and I am willing to accept this explanation on the part of those members of the Profession who are not attached to a public institution, but no such excuse can be offered by those of us who distribute Hospital benefits, and the only motive, which I am compelled to assume, prompts this line of conduct, is an excess of self-interest.

"But this is not all. These recipients of advice gratis are often well-to-do, but naturally mean folk, always ready to take, but never to bestow their substance, who are barely grateful for a kindness, and even venture sometimes to declare that the Practitioner, instead of conferring, is accepting a benefit. . . But I would make two exceptions to my objection to advice gratis: let the advice be given by desire of a brother Practitioner, and for his *indirect* benefit, but not for the advantage of a patient in whom the adviser is in *no way* interested. It is not less rational for a Medical man to demand bread of his baker without payment than for the public to expect advice gratis from us. Most gratis patients can afford to pay something, and if Hospital Physicians and Surgeons give advice gratis *at home*, even the half-crowns and crowns which barely remunerate for his time and trouble the Practitioner whose lot is cast in a poor neighbourhood, are withheld. The second exception I would make in favour of certain educated classes in society who are compelled to keep up what is called an appearance, but whose means are so limited that the Doctor's bill will materially cripple their resources—I allude to governesses, tutors, and many of the junior clergy, to whom our substantial sympathy would be most grateful."

In alluding to the "operation day," the Lecturer thought it very desirable that the Surgeons attached to Hospitals should make a point not only of displaying their manual dexterity, but also should explain to the class the why and wherefore of the operation.

"Now, would it not be more dignified, and, at the same time, more courteous, if the Surgeon, before commencing, were to explain in a few words the nature of the disease or accident, the treatment to which the patient had been subjected, and the various steps of the operation he is about to undertake? But I will go a step further. You will admit that the value of an operation is proportionate either to its capability of saving life, or to the degree of usefulness which it confers; and, that all may judge of its utility, I would suggest that the result be made known occasionally, at the option of the Surgeon, by an exhibition of the patient in the theatre on an "operation day," a sufficient lapse of time having been allowed in order to test its worth. In conclusion, let me remind you that the study of Medicine, if pursued in a right spirit . . . will have a tendency to turn our thoughts to the Great Mind that planned the universe. . . Surely no profession can be more honourable than ours, except that great profession whose ministrations are not physical, and whose influences do not cease with the term of our brief mortality."

MIDDLESEX HOSPITAL.

THE Introductory Address was delivered by Mr. Nunn. He said:—

At no epoch in the history of Medicine have the times been more pregnant with events affecting the interests of the Medical Profession than the present. I feel therefore how great is the responsibility of addressing this assembly, which includes not only Students, but Practitioners and others who take an active part in promoting the study of Medical Science. I feel the responsibility greater, when I reflect how rapid has been the development of the Medical Profession. It is not yet fifty years since legislative enactment gave some degree of unity to the great mass of the Profession, and how surprisingly has organisation permeated that mass? And organisation and corroboration are still going on, and are converting the Profession into a compact whole, as crystallisation converts what is wanting in cohesion into the solid and adamantine.

The day-by-day increasing development of the importance of Medical Science and the expansion of its sphere of application, demand from all connected with it ever fresh labours and greater energy. Progress is, in consequence, now more than ever essential to the vitality of Medicine, and to the maintaining its present position amongst the sciences. There is no finality in science: the more that is known only teaches how much there is yet to learn; as in ascending a mountain, the higher one reaches, the more is seen spread out to one's gaze; objects which at a lower level stood out conspicuous against the horizon are now scarcely distinguishable specks in the mid-distance.

That I have the honour of addressing you as students of this Hospital this evening is a circumstance itself due to the organisation of Medical study. We are met here to inaugurate the commencement and to encourage the renewal of your study of subjects of a complex curriculum, the end and aim of which is to fit you to practise the Medical art. That the task you are about to undertake, that your future labours are of no ordinary character, and that the present moment is an important one in your lives, is not only told you by your own feelings, but is testified to by the assemblage among us to-night of many of the former students of this Medical College, whose presence is as cheering and grateful to their former teachers as complimentary and encouraging to you. And not only is your entry into the ranks and remuster thus greeted by those who have fought and won in the field in which you are about to try your fortune, but by others whose kind and enlightened interest in all that concerns this school it is my duty, on behalf of myself and colleagues, gratefully to acknowledge. Fortunately, you all come to your task more or less prepared, either by preliminary studies or by previous experience here; and your future studies have been systematised—the order in which you are to pursue them has been laid down, so that you are relieved of the perplexity of having to choose with which to begin. They are, nevertheless, multifarious, and some of them of very opposite character; notwithstanding, you must apply your minds equally to all, recollecting that the various branches of science, however diverse they may appear to be, have a cosmical relation to each other. Some studies you may find quite in accordance with your natural tastes; for others you may have an innate dislike. In the one case you may have to restrain a predilection, in the other to overcome a repugnance. . . .

Lectures, books, the dissecting-room and the museum, the wards of the Hospital and the dead-house, comprise the machinery by which you are to acquire a knowledge of the various branches of your study. As to lectures, it is doubtless somewhat tedious to sit out an hour's lecture, and fatiguing to daily attend several such lectures; but tedious and fatiguing as a regular attendance may be, an occasional and irregular attendance is infinitely more so. By the first, every day places work done behind you, and gradually developes the form and outline of what you seek to grasp, as, after much weary labour, every touch of the sculptor's chisel adds life and action to the statue. By the contrary course, the end of the session will bring but the mortifying conviction that all has to be begun afresh. It is not altogether an unknown thing to find a student who despises lectures as old-fashioned, etc. In the end, such a student often comes to despise something else, and to discover that his own untested method, which was to float him high above the heads of humbler men, has somehow or other let him ignominiously drop. . . .

Books must be made friends of, to be taken under the arm. The sigh of despondency which will perhaps, in spite of yourselves, escape when you contemplate the broad back of some compendium of Medicine or manual of Surgery, will give place to the smile of complacency when you have thoroughly become acquainted with it, so that, automatically, any page will turn up to your familiar touch. In reading through a book, you must travel as along the road on a tour, with a light elastic step; if you only crawl along, you will soon become exhausted, missing the exhilarating influence of continually changing scenery.

Begin dissection as soon as practicable. Never attempt fine or minute dissections until you have a good general knowledge of the whole body; but having acquired that knowledge, then teach your hand to go as far as your eye can lead it.

The museum is too generally looked upon by students as a place to stroll into on rare occasions. It should be understood that it will be most profitable to examine every preparation and specimen by the aid of the catalogue, in which all allied preparations are classed together. Do not go into the museum, then, and cast your eye here and there as people do who dawdle through picture galleries, turning only to the catalogue for what may happen to arrest the eye—a proceeding that, by the way, seems generally to terminate in a headache and loss of equanimity; but, systematically and with a definite plan, go over at each visit to the museum some one series of preparations.

Leaving the lecture theatre, the library, and the museum, we enter the Hospital. Our chief difficulties now begin. Your preliminary training will prove of the greatest service in helping you to acquire knowledge from books and lectures; but into the wards of an Hospital you go to study a new language, the alphabet of which is partly to be seen only like that of a language which cannot be spoken—partly to be heard only like that of a language which cannot be written—partly to be touched only like the embossed page by which the blind are made to read. When the heterogeneous alphabet has been mastered, you will at first have laboriously to spell over every letter of every word before you will make out a sentence, or in other words, before you can satisfactorily observe a single case; but the faculty of observation is to be acquired, like any other accomplishment, by practice; and to this end let me offer you the following advice: Never enter a ward without your note-book; never leave it without having registered an observation or a fact, even if at first you but copy a prescription and the name of a disease. If you will but begin even in this humble way, and follow the advice just given, you will at the end of your studentship have accumulated a valuable store of information, on which you may draw in after years. You must bear in mind that case-taking will be one of the chief occupations of your lives. One cannot attempt to treat a patient without first ascertaining what is the matter with him—that is, taking his case, whether you commit it to writing or not; and the quicker and more accurately you can take a case, *cæteris paribus*, the greater will be your success in practice.

There is a great peculiarity in clinical study—that is, this observation of cases in the wards of the Hospital—namely, that the subjects of your study are human beings placed where you find them, not for the purpose of affording you lessons in disease, but by the chances of a hard fate that has either slowly and surely fitted them to be objects of charity or has suddenly seized them from the midst of a life of independent and honourable industry, and has transferred them almost in the twinkling of an eye from the busy workshop or crowded thoroughfares to the strictly regulated ward and the companionship of the helpless, the maimed, and perchance the dying. It is my solemn duty to offer a few words of caution, kindly meant to all, as to your bearing while within the walls of the Hospital itself. All *levity* is to be avoided as a crime: recollect that thoughtlessness will be viewed very differently by one full of health and spirits and by one whose fracture may be caused to ache for hours, or who may possibly be thrown into even a convulsion, by the simple jarring of his bed. Truly has said our poet laureate,

> "A little thing may harm a wounded man."—*Morte d'Arthur.*

When art and skill have failed, and disease has claimed its victim, follow the body to the post-mortem room, where the cold clay its lesson yields. It is there that much of your work in the lecture theatre and dissecting-room will realise for you much gain. Familiarity with diseased structure and morbid appearances will give you confidence under trying circumstances: I allude just now especially to such circumstances as you are sure to be placed in in medico-legal investigations. It may depend upon your dictum whether suspicion shall be aroused or shall be removed; whether the murderer shall escape, or the innocent be unjustly arraigned. In your every-day conflict with disease in practice, a sound knowledge of pathology will be required; even with that knowledge you will be occasionally at fault, but without it continually so.

Such being the nature of your studies, and the means of prosecuting them, it will be well to consider what qualities of mind and body you must bring with you to succeed in your purpose: you must bring, not the delicately gloved hand, but the hard fist of determination and perseverance; you must never permit yourselves to be disheartened. The first few weeks of your residence in London will sorely try your faith in yourselves. The impressions you most desire to retain you will find indistinct and evanescent. It is so frequently to be observed that students beginning energetically faint after the first few paces of the race, losing heart at their inability to retain what they read and hear. Be persuaded that this treacherousness of memory is but a transient disorder, and ought not to lead to chronic despondency. Remember, that with Englishmen to fail implies success; and that to say that an Englishman is down, is but another way of expressing that he is about to rise. Not only must you have this determination not to be beaten, but the ambition to conquer; not the vaulting ambition that "o'erleaps itself," but a much more practical quality. Let "*Excelsior*" be your motto, but let it mean "I strive to be better than I am." Let your competitor be yourself; secure a *daily* improvement, however small; do not trust to violent and spasmodic efforts. The daily plodding, persevering effort is as the slow but irresistible lift of the screw compared with the sudden hoist of the lever: every inch gained is safe; there is no fear of a retrogression more rapid than the advance.

The subject of prizes, I may here mention in connexion with this point, has been one of anxious consideration with the lecturers of this School. It cannot be denied that prizes excite to emulation, and thus to a certain extent lead to greater effort. On the other hand, it is to be feared that emulation may give rise to other more objectionable feelings on the part of the competitors, and thus the *morale* of the competitor may be deteriorated while his intellect is being sharpened. But it is again a question whether a student may not naturally expect to be provided with the means of measuring his powers against those of his fellows, and of being able to produce tangible proof of his diligence. Mainly, then, in such a sense we offer prizes. As a body we have made no effort to establish a number of prizes of high money value. Medical students, mindful of the essence of their mission, ought not to require any such inducements to throw themselves body and soul into the study of their Profession.

Whether you work with yourself or your fellow as your competitor, the preservation of your bodily health is as important as your success; in fact, it is essential to it. Sufficient sleep, food, and exercise, more than you perhaps imagine, will contribute to your progress. I make no apology for referring to such matters; a judicious general looks as closely to the shoes of his men as he does to their weapons. There is no real gain in devoting to reading hours that Nature has assigned to rest. Without a healthy state of the body, the intellectual faculties are unable fully to come into play. It is difficult in London, perhaps, to obtain the proper amount of out-door exercise; but cold bathing and the simplest gymnastics will in a great measure compensate.

Again, relaxation is necessary for fresh endeavour. Idleness, however, is not relaxation. This city offers the amplest opportunities for self-culture, of which you may avail yourself by way of relaxation. Since many of you are destined to pursue your profession in distant countries, how much to your advantage will it be to have some general as well as professional knowledge; and when, as practitioners, you find yourselves thrown into intimate social relation with those who have had every advantage in the way of education that wealth can give, if you do not let the opportunities of self-improvement pass unused, it will be hard if you need fear comparison by contact.

Assembled here with a common purpose, you cannot consider yourselves as a fortuitous concurrence of individuals, each entitled to pursue independently that course which may happen to be most agreeable to himself. It is contrary to the nature of things that individuals can be associated without mutually influencing each other. You have then to undergo not only a technical training, but a moral and intellectual development. Admitted as a student, you incur obligations to your neighbour: one of the most binding is aiding your fellow-student in his pursuit of knowledge. Students should join hand in hand in the acquisition of knowledge, and avoid as the greatest evil a churlish, selfish exclusiveness, unless ambitious of leaving their *alma mater* without the choicest blessing she can bestow—good and true friends, and happy recollections.

"Poor is the friendless master of a world."

Mutual instruction, more than any other thing tends to elevate the general character of a school. A high average of acquirement is scarcely to be gained by any other means, and influences consequently the success of students as a body at the examinations.

The habit of gentleness and kindness towards the poor sufferers who will be under your observation is to be especially cultivated. Sympathy with the afflicted is not an instinct, as some may imagine. It is the result of a combination of higher and rarer qualities, or of education and religion. How many passed the helpless wayfarer before the good Samaritan bent over him to pour oil and wine into his wounds. The Samaritan's was so exceptional an act, that his charitable deed will continue to live as a bright example as long as the human race shall remain what it is.

The majority of you whom I now have the pleasure to address, probably will have come here with your studies only to occupy your time. There may be some not so advantageously placed, and to such I would first say a word or two of encouragement. If we turn to the list of our most distinguished prizemen, I could put my finger on the names of more than one who, during the period of their studentship, had been daily engaged, for some hours at least, in performing the duties of an assistant. The younger of you I would remind of solemn obligations—namely, to those at home, by whom your career will be anxiously watched—to the parents to whom your well-being is almost more than life itself, and by whose industry and self-denial, it may be, the means for your education and comfort have been provided. But to those whose term of studentship is drawing to an end, I would earnestly recommend the devotion of this current session to clinical study. One may reasonably assume that you have by this time learnt to observe; but there is something further to be done, you must learn to infer, and as you go along in your observation, you must translate to yourself what the symptom observed means, and what are its bearings in respect of other symptoms; and when all the facts of the case and all the symptoms are carefully considered together, you may arrive at a correct diagnosis. And you must likewise begin to compare one case with another, so as to gain a view of the various classes of disease. This is the more strictly ratiocinative part of your duty, and which promises the richest rewards. In every other way, likewise, diligently endeavour to fit yourselves to undertake the responsibilities of independent charge of patients by constant attendance in the wards.

Admitted as Practitioners, you at once become sharers in a noble heritage bequeathed by your predecessors. But the estate inherited is not to be misused and squandered; its jewels are not to be scattered broadcast; its mansions are not to be despoiled. No, your inheritance must be handed down to your successors not only unimpaired, but improved. You must strive to cultivate its waste lands; increase its treasures; add yet stately towers to its time-honoured fabric. It is the permanence of your usefulness that will confer real dignity on your Profession. You must endeavour to discover that which shall permanently benefit suffering humanity, and the discovery you shall give ungrudgingly. It is the abstract open-handed benevolence of the ideal Medical man that gives dignity to the whole Profession. Millions of money gained by a secret remedy would confer no dignity on the possessor thereof. What would Jenner's fame now be had he kept his immortal discovery—"the greatest physical good even yet given by science to the world"—a secret for his own pecuniary gain? It is the sentiment with which a benefit is confered that in a great measure determines its value; and while we all strive to the best of our ability for the advancement of Medical knowledge, let us ever bear in mind the glorious declaration of Hippocrates:—"My sole end shall be to relieve and cure my patients, to render myself worthy of their confidence, and not to expose myself even to the suspicion of having abused this influence. . . To whatever dwelling I may be called, I shall cross its threshold with the sole view of succouring the sick, abstaining from all injurious views and corruption."

There is no single function of a Medical Practitioner that is otherwise than honourable. It may be truly said of the Profession that it "knows nothing base, dreads nothing known." Whether with his own hand the Practitioner carefully graduates the dose of sedative that may give ease to the tortured, or convert the ravings of the delirious into calm slumber,—whether he stand at the bedside, as sentinel, to guard against contingent dangers woman in her hour of trouble, that she may say when peril is over, "He turned my fears to hope my sorrows into joys," or whether with skilful hand he lifts the dark curtain of continual night from before the eye of the cataractous, he is alike occupied as no one need be ashamed to be.

Some have falsely concluded that since men with ample fortunes do not enter the Medical Profession as they do the legal, military, and naval Professions, that the Medical Profession is less the occupation for a gentleman than the others just named. The real and true explanation is, that natural instinct and common sense plainly say that the miseries and sufferings of our fellow-creatures are not to be made a pastime of. Surely the Profession has a pedigree sufficiently old to satisfy the most punctilious. It is one that can find employment for powers however great, and present problems difficult enough to make the most self-confident hesitate. Do you love generalisation? there are ample data to be reasoned upon. Are you curious, and seeking to "peep into the birth of things?" there are details to be worked out. Are you bold? opportunities will not be wanting to test your nerve. Are you combative? there stands the old enemy, "the sithe man;" you will find his thrusts difficult to parry.

Then, again, see how the science of Medicine is gradually spreading out its roots, so as to assume an administrative importance. How steadily "State Medicine" is advancing. The revelations lately made in sanitary matters especially connected with the public service will tend to put the Physician in his proper place. The evidence of Sir Ranald Martin and others on the subject of the health of troops shows that the tenure of our Indian possessions will depend more on the skill of our Physicians than on the strategy of our generals.

I am far from undervaluing those worldly advantages and distinctions that men so ardently pursue, offered by other callings in life; but I earnestly trust that, having once entered the Medical Profession, you may never harbour for a moment a thought of distrust of it. Some of you whom I now address as students will assuredly attain to the highest honour accorded to our Profession; but all of you, by a diligent and honest discharge of your duty, may carry with you a consciousness of having alleviated human suffering, and of having lightened the ills of life, which to have "'twere sweeter than to wear what kings bestow."

[The Reports of the other Introductory Lectures are unavoidably postponed until next week.]

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

GUY'S HOSPITAL.

LARGE FIBRO-PLASTIC GROWTH ON THE FACE —REMOVAL—RECOVERY.

(Under the care of Mr. BIRKETT.)

[Reported by Mr. EVERSHED.]

JOSEPH C., aged 21, a soldier, of temperate habits and healthy appearance. In April, 1862, when in the Mauritius, he felt a small hard lump, the size of a pea, just below the left zygomatic arch. He believes that it has always remained fixed from the beginning. It grew slowly at first, but soon increased rapidly. He suffered little pain till it attained a very large size.

On admission, July 4, 1863, there was a large growth, occupying the left side of the face, involving the external ear. It measured seven inches from above downwards, four inches from before backwards, through the base, and four inches in depth, *i.e.*, in projection from the level of the cheek. The skin was healthy for the most part, but in some parts was thinned and injected. It was hard, lobulated, and almost immovable. Two or three glands behind the sterno-mastoid muscle were affected. He now had great pain, preventing sleep.

July 14.—The tumour was removed by Mr. Birkett. He made incisions from the temporal ridge to the angle of the jaw, enclosing an elliptical portion of integument; the tumour was then dissected out without much difficulty. When removed, the zygoma was found to have been absorbed. There was some paralysis of the left side of the mouth after the operation. The wound was left open to allow it to heal by granulation. A microscopic examination of the growth was made, and it was found to be malignant, being made up of nucleated cells, some of a simple form, others lengthening.

The patient did well from the time of removal, the wound granulated, and he left the Hospital well September 3, 1863.

At the time of leaving there was some hardened tissue to be felt connected with the mastoid process. His health had improved, he was getting fat, and was free from pain.

THE HULL INFIRMARY.

EXCISION OF THE SUPERIOR MAXILLA FOR TUMOUR—RECOVERY.

(Under the care of Mr. CRAVEN.)

[Reported by Mr. C. J. EVANS, House-Surgeon.]

THOS. W. H., aged 44, agricultural labourer, married, a healthy-looking man, was admitted, under the care of Mr. Craven, on June 25, 1863, with a tumour of the right cheek. Projecting from the right cheek was a rounded tumour, the size of an orange, extending from the external angular process of the frontal bone and zygoma above to the angle of the mouth below (almost completely closing the right eye), and from the side of the nose to the ramus of the lower jaw. The colour of the integument was natural, except at the upper part beneath the eye, where it presented a rather livid colour, and was coursed by one or two largish veins. It was very firm to the touch, but elastic, especially at the outer part. Pressure and handling caused little or no pain. The interior of the mouth on the right side from the alveolar process (which was concealed by, and enveloped in, the growth) to the inside of the distended cheek presented a large excavated sore, of greyish, sloughy aspect, and fœtid odour. This part of the tumour was softer to the touch than that which presented itself externally. It did not encroach upon the palate, which was of the normal width. There were no enlarged glands beneath the jaw.

History.—The tumour had been growing about seventeen weeks. His notice had been first attracted to a general swelling of the cheek and inside the mouth, resembling the swelling caused by a gum-boil. He had no pain in it, but a feeling of numbness merely. At the end of about five weeks from his first noticing it he showed it to a Surgeon, who recommended him to use soothing applications, and to have a tooth drawn if the swelling did not subside. The gum was lanced shortly afterwards by the same Surgeon. Several of the teeth became loose, and, being much in his way, the man pulled them out himself. He had not noticed that the tumour had grown more rapidly of late, and there had been no increase of pain in it. He had always enjoyed good health, and there was no history of "tumour" in his family. The disease was diagnosed to be of a malignant character.

June 27.—Chloroform was administered to its full extent to begin with (but its inhalation was not continued afterwards), and the whole superior maxilla on the right side was excised in the following manner:—The right central incisor tooth was first extracted, an incision was then made in a curved line from the front of the zygoma to the angle of the mouth, a second backwards along the zygoma for a short distance, and a third incision was carried from the root of the nose downwards and round the ala, through the upper lip in the mesial line. The integument of the cheek bounded by these incisions was then carefully reflected upwards, and detached from the tumour in front up to the level of the floor of the orbit. The zygoma was now divided by bone pliers, and then the external angular process of the frontal bone. The usual process of the superior maxillary bone was then divided in the same way. An incision was next made along the side of the nose through the soft parts covering the alveolar process, and another through the soft parts of the palate in the mesial line. The hard palate was then divided by bone-pliers, and the whole upper jaw-bone was then easily and quickly drawn out and removed. There was very little hæmorrhage, considering the formidable nature of the operation, and only two or three ligatures were required. All bleeding having ceased, and it being seen that the whole of the tumour was removed, the cavity left was filled with pieces of lint to give support to the cheek. The flap of integument was then replaced, and carefully brought into neat apposition by means of hare-lip pins and silver wire sutures. A pin was placed in the upper lip, and another at the angle of the mouth, the remaining parts being brought together by suture. Scarcely any deformity was apparent after the operation, and the man was removed to bed in a comfortable state. A pad of wet lint was applied over the face, and milk diet enjoined.

28th.—He had passed a very good night, and the wound was looking very well.

29th.—A pint of beef-tea daily was ordered, in addition to milk diet.

30th.—The dressings were removed from the wound, when it was found the incisions had united by first intention throughout their entire length. There was a discharge from the right nostril, and a little swelling of the lower eyelid. Simple dressing was applied.

July 2.—Some portions of the lint with which the cheek had been stuffed were removed through the mouth, and the pin was withdrawn from the upper lip.

3rd.—The remainder of the lint first introduced was withdrawn, and some fresh put in. There was not much discharge externally. Two or three of the sutures were removed.

7th.—The remainder of the sutures were taken out.

9th.—The ligatures came away this day with the dressing; the lint was withdrawn, and no more was introduced. He was ordered four ounces of port wine daily, and allowed to take a little more solid nourishment, and subsequently took the ordinary common diet of the house. He had a little difficulty in drinking.

August.—There is some little depression of the cheek, and he cannot voluntarily close the right eye, apparently from want of action of the orbicularis palpebrarum, which gives a somewhat staring appearance to the eye. The man's appearance was, however, greatly improved, and altogether the result of the operation was very satisfactory.

Examination of Tumour after Removal.—It was rounded and lobed, especially that part which occupied the pterygo-maxillary fossa, and it had every appearance of being completely and entirely removed. On section firm, the cut surface was smooth, but became slightly granular after exposure; the central part of a pinkish or yellowish white colour, the circumference more vascular and purplish, and in places of a green colour. The cut surface presented no appearance of fibous tissue; as seen by the naked eye, it had quite the aspect of a malignant growth both externally and internally. Under the microscope the juice scraped from the cut surface exhibited no fibrous element, but simply a confused mass of broken up cells and granular matter.

ROYAL LONDON OPHTHALMIC HOSPITAL.

CASES OF SCHUFT'S OPERATION.

[Communicated by MR. WORKMAN, House-Surgeon.]

IN reporting a few cases of Dr. Schuft's method of removing cataracts, it will be best to commence by giving an outline of the way in which he recommends this operation to be done, and in what cases he considers it suitable. I may here mention that since he brought this operation before the notice of the Medical Profession, Dr. Schuft has changed his name, on the occasion of his marriage, by Royal Letters Patent, to Waldau, and therefore I shall refer to him by that name. To Mr. Hulke I am indebted for supplying me with a translation of a few paragraphs from a pamphlet published by Dr. Waldau, at Berlin, in 1860, entitled "The Scooping out of Cataracts, a New Method." After directing that the lids be separated by a spring speculum, and the globe fixed by a pair of forceps, the Surgeon is to make an incision with one of Jaëger's iridectomy knives, within the edge of the cornea for about a fifth of its circumference. He is then to draw out a piece of the iris with a pair of forceps, and cut off about a fifth of it. The whole breadth of the iris is not to be removed, but a belt at its ciliary margin is to be left, so as to afford support to the vitreous, and prevent prolapse of that body. The edge of the lens at this part comes slightly forwards, from having lost some of its support. The capsule is now to be torn through. Dr. Waldau thus describes the way in which the lens is removed:—"The Surgeon introduces the scoop into the wound, at first pushing on very slantingly towards the centre of the eyeball till it has passed beyond the equator of the advancing lens. He then slopes the handle backwards, at the same time pushing the scoop onwards, as if he meant to shell the lens out of its bed. When the centre of the hoop has reached the posterior pole of the lens, with a lever movement all that is embraced within its broad surface is cautiously lifted out into the anterior chamber. The greater part of the lens is thus removed in one spoonful." Any remaining fragments are taken out by the re-introduction of the scoop. Lastly, the globe is to be lightly rubbed with the lids, so as to wash any fragment that may be concealed behind the iris into the pupillary area. Dr. Waldau uses a scoop with a flat bottom and steep edge, and describes it as having the following advantages:—

1st. That its broad surface enables the operator to support the cataract so as to lever it entire, or in greater part into the anterior chamber.

2nd. It has a sharp edge, forming a large curve, by which the scoop can be stuck into the back of a hard lens so as thoroughly to fix it.

3rd. The anterior lip being prominent, assists in drawing out a cataract, by pushing it, as it were, from behind.

4th. The stalk is smaller than the breadth of the spoon, so that it does not make the wound gape during the manipulations.

"With the aid of the scoop," he says, "we are able, through a linear wound, to remove completely, and without excessive damage and peril to the eye, every lens equally well, whether it be transparent or partially or wholly opaque, and whatever its size or consistence." The ability to fix the eye all through the operation he considers as a great advantage. The following cases Dr. Waldau mentions as suitable for the operation:—

1st. All cataracts in persons above twenty-five or thirty years of age, which have a hard or more or less considerable nucleus.

2nd. Not perfectly ripe cataracts in both young and old persons.

3rd. Cases of cataract with closed pupil.

4th. Cases with foreign bodies lying in lens.

This operation is now frequently performed with very satisfactory results at the Royal London Ophthalmic Hospital, Moorfields. In doing it, Mr. Critchett thinks it best to remove a portion of the circumference of the cataract before passing the scoop beyond the equator of the lens, and he finds that it generally takes about four or five spoonfuls to remove the lens entirely.

It is very important to remove every portion of the nucleus, for, if a fragment be left, it will act as a foreign body, and set up iritis, and so much lymph may be thrown out that closed pupil may be the result.

In introducing the spoon, unless great care is taken, the hyaloid will be ruptured, and more or less vitreous be lost, which accident may be followed by internal hæmorrhage, and detachment of the retina, or even suppuration of the globe.

After the Surgeon has removed a portion of the iris, he is sometimes annoyed by the anterior chamber filling with blood, and this must be removed by the curette before proceeding to the next step of tearing through the capsule. The capsule should be torn through along the margin corresponding to the wound in the cornea, so that the scoop may easily pass inside it.

This operation seems suitable to all the cases Dr. Waldau has enumerated, except where the nucleus is hard and bulky, as then it is difficult to remove it whole through a small wound in the cornea, and if it should break and any fragment be left behind, the consequences previously mentioned may ensue. This method is particularly applicable to patients who are nervous, and wish to be under the influence of chloroform, as there is no danger of prolapse of the iris, or expulsion of the vitreous being produced by sickness, which often follows its administration. For the same reason a cough does not interfere with its success. This operation is easier to perform than ordinary extraction on persons whose eyes are much sunken. The coloboma after the operation causes very little disfigurement, being hidden by the upper lid when the incision is made at the upper part of the cornea.

The operation over, the Surgeon has little cause of anxiety, as the recovery is generally very rapid, on account of the wound in the cornea being so small, and its edges lying so closely together; it heals in a very short time.

There is often a remarkable absence of intolerance of light, so that the patient in the course of three or four days opens his eye, and looks about him with very little inconvenience; on the other hand, in ordinary extraction, the Surgeon watches his patient for several days with great anxiety, knowing that till the section is firmly united the eye cannot be considered safe.

The following cases illustrate some of the preceding remarks:—

Case 1.—William B., aged 57, admitted under the care of Mr. Lawson, with cataract of the right eye, which had been coming on for one year. He had good perception of light, and the pupil was active.

August 28.—Mr. Lawson removed the lens by Schuft's operation. The section was made within the corneal margin at its upper part, the nucleus was not very hard nor bulky, and there was no difficulty in scooping it out

30th.—The patient could open his eye wide, and could bear a moderate amount of light without any inconvenience. He had had no pain, no inflammation of the iris, and there was a good anterior chamber.

September 7.—He had gone on well; the eye was quite quiet. A piece of capsule could be seen at the lower margin of the pupil, but the upper part was quite clear. With No. 2 convex he could read No. 8 (Jaëger), and see distant objects distinctly with No. 4 convex.

8th.—Discharged.

In the following case the cataract from one eye was removed by ordinary extraction, and from the other by Schuft's method:—

Case 2.—Amelia W., aged 58, was admitted, under Mr. Critchett's care, with fully formed cataracts in both eyes.

On March 13, Mr. Critchett removed the lens from the right eye by the ordinary operation, making the inferior section, as the eye was very deep set and persistently rolled upwards. He then proceeded to remove the left lens by Schuft's method, making the incision at the upper part of the cornea.

16th.—No pain in either eye; lids not swollen.

24th.—Yesterday, on sneezing, a sharp pain darted into the right eye, and it continued to feel uneasy for some hours, while in the left she felt no uncomfortable sensation.

26th.—Good anterior chamber in the left eye. In the right the iris lies against the cornea, the aqueous escaping as fast as it is secreted.

28th.—Discharged. Aqueous still escapes from the right eye. The left eye is quiet. With No. 2 convex lens she can make out the shape of letters of No. 2 Jaëger's test type at eight inches well enough to read them, she says, if she knew her letters; with a 3½ convex lens she can count No. 30 of Snellen's test types at a distance of twenty feet.

April 17.—Right anterior chamber has refilled; pupil small, round, and central. With a No. 2½ convex lens she can count letters of No 20 (Jaëger); with a No. 5 convex lens counts No. 23 at fifteen feet.

The next case shows the applicability of Schuft's operation when a foreign body is imbedded in the lens.

Case 3.—Geo. H., aged 18, a coach-body maker, came under the care of Mr. Hulke on December 31 last. He stated that fourteen days previously, dimness of the right eye came on without pain or redness, and, as it increased, his mother applied a lotion of spirits of camphor and nitric æther, which was followed by inflammation. On examining the eye, the pupil was seen to be semi-dilated, the lens hazy, posterior synechia below, opposite which there was a faint, small scar in the cornea; the conjunctiva was congested. By oblique illumination, a glittering metal splinter, about two and a-half lines long, was seen imbedded in the lens. The aqueous humour was muddy, and the texture of the iris confused. The patient complained of pain, and could not bear the light. It was singular that he was not aware of having met with any injury, and could not believe that there was anything in the eye; if such were the case he could only account for it by the screw-driver splitting off the edge of a screw when he was at work.

Chloroform being given, Mr. Hulke removed the lens by Schuft's operation, making the incision at the outer side. The foreign body was removed in the first scoopful. The following note was made on:—

January 14.—The pupil acts, and is clear. The redness of conjunctiva is nearly gone. With 2½ convex can read No. 10 Jaëger, and with 3½ is able to tell the time by the clock at twenty-five feet.

On February 4, with 2½ convex he could read No. 2 Jaëger.

Case 4.—William P., aged 72, was admitted under Mr. Critchett's care, with fully-formed cataract of the right eye. A cataract had been removed from the left eye last year at a provincial Hospital. He had only perception of light with it, as three-fourths of the cornea was opaque, the iris being adherent to the leucoma.

March 17.—As the patient had an enormously powerful orbicularis muscle, and was perpetually closing the eyes with great force, Mr. Critchett thought that ordinary extraction would be sure to fail, and so decided to remove the lens by Schuft's method. The incision was made in the upper margin of the cornea, the patient having been placed under the influence of chloroform. The cataract was found to be excessively hard, and the nucleus bulky.

20th.—No pain. Lids not swollen.

23rd.—A severe attack of iritis has come on, accompanied by pain. Six leeches were applied, and they relieved the pain.

26th.—Some lens matter is visible in the pupil. Eye rather quieter.

April 2.—The iritis is gradually disappearing.

8th.—The iritis and pain are gone. The pupil is much contracted, and drawn up towards the scar. The eye bears the light well.

On the 16th he returned home.

In June he came into the Hospital again with the pupil closed. A portion of the iris was removed, and he was discharged with good vision.

ULCERATION OF THE CORNEA AND HYPOPYON —PARACENTESIS OF THE CORNEA.

[Communicated by Mr. Spencer Watson.]

Jno. H., a strumous boy, 14 years of age, was under my care in the early part of 1860, with tinea tarsi and lippitudo, and subsequently with ulcerative keratitis.

In July, 1859, he had an attack of low fever, by which he was very much reduced, and in the following March was admitted under Mr. Bowman's care, in the Royal London Ophthalmic Hospital, with a large ragged ulcer of the left cornea and hypopyon. Mr. Hulke at once tapped the anterior chamber at the lower margin of the cornea, with very great relief to the patient.

He left the Hospital a few days afterwards very much improved in every respect, but shortly had a relapse—the ulcer sloughed, and the iris prolapsed into the wound.

On June 8, 1860, this ulcer had cicatrised, and the rest of the cornea had become clear, the pupil being only partially obstructed and vision very little impaired. He had at this time impetigo of the scalp and tinea, and remained in a very low state of health.

On the 11th the right cornea had become violently inflamed. He complained of much pain, and there was intense photophobia and lacrymation. The whole cornea was hazy. I ordered him tonic medicine containing quinine, a blister behind the right ear, and a belladonna embrocation round the brow and temple.

On the 22nd, however, the symptoms had all increased; there was great vascularity of the sclerotic, and two circular ulcers had formed on the cornea a little to the inner side of the pupil; at the bottom of the anterior chamber a layer of yellow pus had formed. Chloroform was administered, and I made a puncture at the lower margin of the cornea into the anterior chamber. A small quantity of pus escaped, but from its being extremely viscid, the greater part of it remained.

The relief of the pain and intolerance were very striking at the time, but two days after (June 24) he was again complaining of pain in the eye, and the photophobia had increased. Chloroform was again given, and the anterior chamber tapped a second time; the hypopyon remained, but the relief of the pain was very marked. He was now taking quinine, a moderate amount of stimulants, and good nourishing diet.

On the 29th the ulcers were rapidly healing, and the cornea becoming clearer; little or no photophobia remaining.

On July 8 the ulcers had healed, there remained a slight nebula over the centre of the cornea, and a cicatrix near the margin. Vision was almost as good as previous to the attack. There was still some tinea, but he was altogether much improved.

August 15.—I again saw him, and the improvement continued. I then lost sight of him, but heard that having "fallen on evil days," and been much exposed to cold and privation, he had had a relapse, and was almost in as bad a state as ever.

The above case is a good illustration of the beneficial effect of the treatment of certain forms of keratitis by paracentesis corneæ. The class of cases most suited to this kind of treatment are those of onyx, and any form of ulcer of the cornea, with pus in the anterior chamber, and where there is increased tension of the globe and severe pain. It appears to be not at all essential that the pus should escape from the puncture (though it is doubtless better that it should do so). The mere relief of tension by the evacuation of the aqueous humour is sufficient. When this has been accomplished, absorption of the pus will go on rapidly, and at the same time the pain caused by the pressure on the ciliary nerves will be speedily relieved. If the puncture closes there is no objection to repeating the operation, as was done in this case, and it may be resorted to a third or fourth time if necessary. The administration of chloroform was necessary in this particular instance, owing to the want of control on the part of the patient, but it should, if possible, be avoided, as the performance of the operation is not attended with severe pain to the patient, and with sufficient care and experience on the part of the Surgeon is free from danger to any important structures. In a case of this kind the application of atropine in the form of drops is almost useless, as, owing to the tension of all the vessels of the eye and of the cornea, very little absorption goes on. There is, besides, great difficulty in applying them as frequently as would be desirable. I therefore prefer the belladonna embrocation to the brow, which has a very soothing effect, and relieves the excessive intolerance, but is certainly less efficacious than the atropine drops when they can be properly applied. Neither can be relied on while the conditions described as coexisting in the above case present themselves. After puncture of the anterior chamber the drops may be applied with advantage.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

NOTES ON THE USE OF THE OPHTHALMOSCOPE IN AFFECTIONS OF THE NERVOUS SYSTEM.

(Communicated by Dr. Hughlings Jackson, Assistant-Physician to the Hospital.)

I have never had the opportunity of examining the retina during a fit of epilepsy under favourable circumstances. I have tried to do it repeatedly, but the difficulties, little and great, are to those who have not tried it inconceivably numerous. The following is the best specimen I can bring forwards. I have already published an examination of the eye in a case of convulsions induced by placing the patient erect; but it may be said that that was a case of fainting only, and could not be accepted as a faithful representation of what takes place in the retina in idiopathic epilepsy.

A patient, William T., aged 8, had been attending some time under the care of my colleague, Dr. Brown-Séquard, for epilepsy. One day the porter brought the boy—who had just been taken with a fit—into my room in his arms. Unfortunately he did not at once take him to the lamp, and, when everything was arranged for looking, the convulsions had, I think, ceased; but I was so much occupied in finding the optic disc that I noticed little else. The pupil, however, was still very widely dilated, and I caught the optic disc of one eye. It was whiter than normal, and the veins were large and dark. I soon lost it, and then the pupil rapidly became so small that I could not again illuminate the fundus. It is of course of great moment to ascertain the exact stage of the paroxysm when the disc is seen.

The following are notes of an ophthalmoscopic examination made in two cases in which the patients complained of headache with a little dimness of sight *after* a paroxysm of epilepsy. My object was of course to learn somewhat as to the condition of the intra-cranial circulation *after* an attack of epilepsy, and also *to see* the state of the vessels of the retina and the nervous tissue (the optic disc) supplied by them, in what, judging from the patients' statement, would generally be called "congestive headache." For, as the arteria centralis retinæ may be almost considered as part of the cerebral circulation, we shall, no doubt, learn from studying its varying conditions something as to the condition of the other branches of the internal carotid which supply the brain.

In a case in which an epileptic complained of slight dimness of sight and headache after an attack of epilepsy which she had had the same day, the note is as follows:—

"She [a girl, aged 8, idiopathic epilepsy—a tongue-biter] had a fit at 8 a.m. I examine by the ophthalmoscope at 10·30 a.m. without using atropine. I find the veins remarkably large and dark, and the arteries also seem darker than normal. The disc is hyperæmic."

In another case in which, after a fit, there was dimness of sight and frontal headache, the veins appeared very large, and the optic disc was reddened as if flecked with red. It was not uniformly coloured, but somewhat like white bibulous paper slightly smeared by red ink.

I have examined the retina in a case of wound of the spinal cord, in which there were, on the left side, symptoms like those following section of the cervical sympathetic (ptosis, contraction of the pupil, etc.), but I could not find the least difference in the size of the vessels or in the colour of the optic discs, both eyes being under the influence of atropine; besides there was not, nor had there ever been, any defect of sight whatever.

I have had under my care a case of neuralgia of one side of the face, with contraction of the pupil and slight ptosis. As there was, as well as the contraction of the pupil, considerable narrowing of the ocular aperture, it looked, so far, like a case of paralysis of the cervical sympathetic; and as there was neuralgia on the same side in most of the branches of the fifth nerve and hyperæsthesia to the touch, and as the least exertion made the patient sweat on the affected side, this opinion seemed confirmed. The affection was, I consider, in its mechanism, so to speak, I do not say in its cause, a sort of miniature herpes zoster. There was the neuralgic pain, but the changes of nutrition were represented only by a slight haste of the natural functions of the skin, and not by the uproar of actual inflammation. There was something more than paralysis of the branches of the sympathetic correlated with the sensitive nerves to the iris and face, as section of the sympathetic does not produce neuralgia, but this paralysis was, I believe, *one* link in the chain. Although the pupil was only one-third the size of the other, there was no defect of sight whatever. I did not look for defects of sight because the pupil was contracted, but because there might be changes in the retina similar to those in the iris. The patient could read small print easily, and could also see well in the distance. He had no dimness of sight, no "clouds," "colours," "specks," etc., and not a trace of intolerance of light. He could bear, he said, to look at the fire without any annoyance. I dilated the pupil by atropine, and made an ophthalmoscopic examination. I found no signs of vascularity, the optic discs being as nearly alike as possible. This examination was made soon after the pain had began, but I examined again a few months afterwards on a relapse of the pain; the pupil being still contracted, I again used atropine. The discs were then quite alike in every respect.

I should *a priori* have expected to have found some slight defect of sight and corresponding changes in the vascular supply of the optic disc in such a case, and in the case of paralysis of the cervical sympathetic from injury to the spinal cord. The retinal arteries are supplied with sympathetic nerves as well as the iris, but as I could find no change in their calibre and no alteration of colour in the optic disc, and as there was no loss of sight and no intolerance of light, nor, in fact, any departure from a healthy state of the retina, it has occurred to me that the part of the cerebro-spinal axis which supplies the vessels of the retina (indirectly by the sympathetic) may be different to that which supplies the iris. If this were so, I should endeavour to ascertain if the same holds good as regards the brain, *i.e.*, if it and the retina are supplied by a different region of the cerebro-spinal axis from that which supplies the external parts of the head, iris, skin, outer ear, etc. The meningeal arteries are chiefly branches of the same great arterial trunks that supply the outside of the head, so that possibly they may be under the control of the same part of the sympathetic system as the iris, outer ear, etc.; whilst the retina and auditory expansion, although outside the cranium, receive branches from the arterial trunks which supply the parts inside, and may be under the government of the part of the sympathetic system which supplies the brain.

The Physiological Effects of Sulphuret of Carbon.—Dr. Delpech, a Professor of the School of Medicine, has recently published some important observations on the evil effects of the sulphuret of carbon and other noxious substances employed in certain trades. Sulphuret of carbon is a transparent, exceedingly fluid, and highly volatile liquid, possessing a characteristic and disagreeable smell; it is one of the most dangerous substances known in chemistry, but unfortunately also one of the most useful. Its chief property is that of dissolving india-rubber with the greatest ease, whence it follows that it is extensively used in the factories where that substance is blown into bladders for various purposes. The vulcanisation of india-rubber—that is, the operation by which it acquires the valuable property of increased elasticity and insensibility to a degree of heat which it otherwise could not bear, is chiefly effected by sulphuret of carbon, aided by chloride of sulphur, although it might be equally obtained in certain cases by sulphur alone. But the men engaged in this work are exposed to the effluvia of the sulphuret, which in a short time causes headache, vertigo, and an over-excitement of the nervous system. The patient talks with great volubility, sings incoherently, or laughs immoderately, or else hides himself and weeps. This state may even lead to lunacy, and at all events will cause obtuseness and imbecility. To obviate these serious effects, Dr. Delpech recommends a glass screen to be placed between the workman and his table, leaving two holes for the hands and arms; these also are to be protected by ample sleeves of waterproof stuff. Another hole is to be left for the nozzle of the bellows which they use to blow the india-rubber into balls. These precautions, Dr. Delpech thinks, ought to be enforced by the authorities.—*Galignani.*

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SATURDAY, OCTOBER 3.

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TESTS OF THE VALUE OF A MEDICAL CHARITY.(a)

A PAMPHLET of remarkable ability has lately appeared on the management of the Medical charities of Birmingham. Although published anonymously, it is well known to be the production of a layman, and therefore is more likely to influence a public ever jealous of professional dictation and suspicious of motives having their origin in Professional interests. It is quite true that several of the individual institutions subjected to the trenchant criticism of the writer possess more than local claims on attention. Such Hospitals as the General and the Queen's, planted as they are in the metropolitan seat of industry of the Midland Counties, may be considered national. It is not our intention, however, now to enter on the various shortcomings and details of unwise management with which the writer charges the bulk of the Medical charities of Birmingham. Many of his allegations have doubtless a good foundation in fact, others appear to us capable of a different construction, and some errors must be referred to that category of imperfections which are inherent to every human institution. We shall content ourselves at present with calling the attention of our readers to a section of the pamphlet intended to be of universal application, to certain of whose conclusions we most fully subscribe, and which at least enforces some lessons needed at the present time.

The section is entitled "Tests of the Value of a Medical Charity." The writer begins by protesting emphatically against dignifying by the name of "charity" any institution in which or by whose influence gratuitous relief is afforded to the poor. "There are cases," he writes, "where patients have been relieved when it would have been better that they should have been turned away unaided; there are cases of institutions which, although relieving pain, are yet subversive of the elementary principles of true charity, and should be cut down as cumbering the ground; there are cases where, unhappily, the covering of Christian philanthropy has been neatly folded over the skeleton of personal aggrandisement or private ambition." In order to apply the tests which he proposes, the writer divides Medical Charities into (1) General Medical Charities; (2) those established for the relief of special diseases, and (3) those established for the relief of special diseases in places where similar special charities have previously existed. The tests he proposes of the value of General Medical charities are four in number:—1. A large and continually increasing number of patients, or at least of applicants for relief, in proportion to the increase of population. 2. A steady and progressive increase of revenue, from legacies, donations, and, above all, annual subscriptions. 3. The number and competence of the Medical staff, and 4. The mode of establishment and of election of the Medical officers, and of advertising. The first test is self-evident, and requires no comment; the second, we suggest, may be applicable to many local charities, but it is not unerringly a true one. Charity is not like merchandise; the demand does not always create the supply. Witness the unendowed Hospitals of London, whose wards and out-patient rooms are always full, and yet whose committees are ever struggling under loads of debt which would crush anything less tenacious of life than a Medical Charity. The third and fourth tests are, within certain limits, crucial. There may be exceptions which prove the rule, but we fully agree with the writer, that "If there be one Medical officer only, the institution cannot be termed a public charity, and the public will have a right to inquire whether it is not a private speculation."

That a progressive increase of patients should be met by a proportionate increase of the Medical staff is a self-evident truth. It is in this particular that one of the heaviest charges against the Birmingham General Hospital lies. Eighty years ago the General Hospital admitted in twelve months 373 in-patients and 411 out-patients. The Medical staff then consisted of four Physicians and four Surgeons. Last year, 2612 in-patients were admitted into the wards, and 25,902 out-patients received relief. Yet with this enormous increase in the work of the Hospital, and an eight-fold increase of the population of the town, the number of the Medical staff is still the same. The interests of the public suffer by such unwise exclusiveness equally with the interests of the Profession. "There is a certain sort of extension," writes the author of the pamphlet, "about which Hospital Boards and the public seem pleasantly unanimous—beautifying of chapels, erection of new wings, additional paid resident-officers, house-stewards and secretaries, convalescent departments—perpetually increasing expenditure. It may be necessary, I cannot say—but when shall we hear of an extension of the Medical staff, the only extension which benefits the public, without costing them a penny; the only extension by which it will be possible to cope with the almost fabulous number of patients at some of our institutions." On the mode of establishment of Medical charities, the author says some home truths, not, certainly, in the most honeyed phrase; and in no neutral colours he sketches the origination of a charity which is, and of one which is not required.

> "If a new institution be required, and the need of it be urgent, it will probably be established in the following manner:—Documents will be printed and widely circulated, containing evidences of a particular want, and showing the means by which that want may be supplied. The attention of the public journals will be called to the facts, the claims of the institution will be advocated in paragraphs and leading articles, discussion will be invited; meetings of the promoters will be called, embracing leaders of all sections of religion and politics, for charity is of no party. A public meeting will then be called, either by the chief magistrate or by some disinterested citizen of eminence and position. The charity will be founded by a resolution indicative of its necessity, and challenging contradiction. Such meeting will be open to reporters and jealous professional critics. The officers will be appointed by *open competition*. If the project pass safely through such an ordeal, what honourable man will withhold a God-speed from the infant institution.
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> "If, however, an institution be not required, if there be no need of its existence except to suit the requirements of some *individual* or small knot of individuals, the following will probably be the method in which it will be foisted upon the subscribing world:—Some Medical gentleman of slender parts, but with a desire for notoriety, tormented by his want of success, and aggrieved that the governors of established charities do not estimate him at his own valuation, *determines that he will become an institution*. A few dependants or relatives meet in a back parlour, subscribe a little money, and nominate their friend, the Surgeon, and in a few days the public are startled by finding that the need of the new institution has long been severely felt; that it has already been founded; that the Medical officer has been

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(a) "The Medical Charities of Birmingham;" being Letters on Hospital Management and Administration. By Scrutator. Birmingham: 1863.

appointed; and that subscriptions are earnestly requested from the humane. An institution so established either never succeeds, or only after a great lapse of time. The first requisite is secrecy; disinterested persons are not invited to co-operate; persons connected with existing charities of the same class are carefully shunned; the chief promoter is invariably constituted honorary secretary, and, at the public expense, duly advertised in the newspapers."

It will be conceded that his strictures on advertising may prove useful in a town where a Medical institution exists which spends more than five-twelfths of its income in advertisements and printing! Four tests are also laid down by which the value of special Hospitals may be judged — 1. Are the special delicacies and difficulties of the disorder such as require minute manipulative skill and Practitioners of great experience? Under this head the value of institutions for diseases of the eye is recognised. 2. Are the special conditions and peculiarities of the individual patients such as to demand separation from others? Here, also, the benefits derived from small-pox and fever Hospitals are acknowledged. 3. Are the prepossessions of patients or the general nature of the maladies such as to render a special institution necessary? The importance of general Dispensaries for patients affected with disorders which do not disable them from personal attendance at Hospitals is insisted on. The writer, indeed, is of opinion that out-patient departments would be better divorced from all Hospitals, on the ground that the crowding numbers of patients together destroys ventilation, and that the time of the Medical officers will not allow them to give full attention to two departments. Neither of these objections, however, can always be urged They do not apply to the out-patient system in most of the London Hospitals where special Medical officers are intrusted with this charge, and where the rooms in which the patients assemble are separate and apart. The fourth test "Is the special apparatus necessary for the management of the cases so costly, or do the cases themselves require such skill and management as to render a special charity useful?" refers especially to Orthopædic Institutions. If the general Hospitals *cannot* take cognisance of bodily deformities, Orthopædic Institutions are necessary; if they simply *do not*, a deformity fund should be added to a general institution to supply the needful apparatus, and a special charity should not be established. Lastly, the only possible justification the writer allows for the establishment of a special Medical charity, in a place where one already exists devoted to the same class of disease, is the known inadequacy or inability of the existing institution to supply the want it was founded to fulfil.

Whilst giving a general assent to the author's conclusions, it must be borne in mind that we do not hold that the same rule and standard can be set up for all Medical charities wherever situated. Experience proves that the exigencies of the poor of a city like London cannot be met without calling into play that very machinery of advertising which he so broadly condemns. Look at the mode in which London charities, other than Medical, of universally acknowledged utility, such, for instance, as orphan asylums and schools, are supported. The fact is, that people will not go out of their way to seek channels for giving. By some method or other they must be brought to their very doors. The necessity for advertising will be in proportion to the size of the town, the density of the population, and the separation of the poor and rich quarters. Again, with regard to special Hospitals, an Orthopædic or Consumption Hospital in a metropolis may be a national benefit, but it by no means follows that in every provincial town two or three special institutions are to dispute the ground with the County Hospital, and to divert the stream of charity from its long-established and normal course.

Obstetrical Society, 53, Berners-street.—The first meeting of the Obstetrical Society is announced to take place on Wednesday, October 7, at the usual hour.

THE WEEK.

MEDICAL "TESTIMONY" IN SCOTLAND AND AUSTRALIA.

Last week it was our duty to notice a case at Dundee, in which justice was, as we believe, frustrated, and an inquiry into the cause of death of a human being rendered almost ridiculous by the testimony of some members of our Profession. They solemnly deposed their belief that a number of most severe bruises on the head and face, twenty-four fractures of ribs and sternum, complete rupture of the liver, and a lacerated wound of the pudenda could have been produced by a simple fall of a woman, with her husband, over a table, as he was carrying her in his arms. The very least which the propounders of such evidence should have done would have been to make experiments to show that the ribs and sternum of a young woman could be broken in twenty-four places by her own weight, and that of her husband falling on, or with a table, though the height of two or three feet. But, questionable as this evidence was, it is surpassed by that given in the *Australian Medical Journal*, and *Medical and Surgical Review* for July:—

"A married woman, aged 42, drunken, and of bad character, after being in a state of continual drunkenness for several days, complained of feeling very ill on the night of Saturday, May 10. She was carried to bed, as was thought, in a state of intoxication, between nine and ten p.m. At about eleven she got out of bed to use the *pôt de chambre*, when it was noticed that the bed was stained with blood, and that the utensil also contained some. From the time she went to bed till this was observed, she had not been left for more than half-an-hour by her daughter, a girl of eleven. She may have been asleep on a chair in the adjoining room. The deceased, between four and five, sent her daughter to a lodger, who was requested to go for a neighbour. Deceased never mentioned anything leading to the belief that she had been injured."

At the inquest held by Dr. Preshaw, the Coroner for Castlemaine, Dr. James Burn Malcolm deposed as follows:—

"On Sunday morning last, about seven a.m., I was called by a man named Cannon to come to the deceased, and make haste. I made haste, and when I came the woman was dying, and she died in a few minutes. I saw blood about the dress. This day, at the request of the coroner, made a post-mortem examination. The heart and lungs were healthy. The liver and other organs of the body not diseased. She was not pregnant. No flooding had taken place from the womb, which seems not to have been lately menstruating. The vagina was torn in its left lateral aspect, communicating with the cellular tissue adjacent. The vagina on the whole was greatly distended, but not amounting to tearing, with either the rectum behind, the bladder in front, or peritoneal cavity above. The rectum from where it joins the skin at the anus up to the sigmoid flexure of the colon, was incapable of being distinguished from the surrounding cellular tissue, it was so torn and lacerated. At the lateral turn of the first or upper portion of the rectum, there was a large hole right through the walls of the rectum, right into the cavity of the peritoneum. In the cavity of the peritoneum I found the broken composite candles (produced) which had been with great force thrust behind the lesser intestines up through the rectal opening in the meso-rectum; also through the mesentery into the upper and back part of the abdominal cavity, and behind the smaller intestines. There are no other marks of violence on the body. On the following day (May 12) Mr. Malcolm deposed:—I have again examined the body of deceased. I observed yesterday, and I do now, that there are no marks of blood on the hands of deceased. My examination to-day only confirms me in the opinion that deceased could not have introduced the candles herself. They must have been put there by main force; the person could not put them there herself."

Here we have, as Dr. Malcolm observes in a properly indignant letter to the *Australian Medical Journal*, "a woman's rectum pounded into a *pulp*," and candles forced into the peritoneum.

Will it be believed that members of our Profession could be found who could disparage Dr. Malcolm's opinion that "a murder had been committed, and that it was *impossible* the woman could have inflicted these injuries on herself?" Alas, yes! Dr. Mackay said:—

"I am of opinion that those appearances *could have been produced by a person labouring under insanity temporarily*, but it is more probable that they were caused by the hand of a second party."

While Dr. James M'Nicoll goes so far as to say:—

"I believe that, under extraordinary excitement, it is *just possible* for the deceased to have introduced the candles produced. When once the first candle was introduced, the second might be easily introduced. I have read of such like cases of foreign bodies having been introduced by the patients themselves, under great mental excitement, producing laceration of the uterus, vagina, or rectum. I think that death would have been produced within a few hours from the time the candles were introduced. If the candles had been quickly passed up, there might have been no blood on the fingers of the deceased."

We wait to hear the facts on which Drs. Mackay and M'Nicoll base their opinion that a woman in a state of drunkenness *could* have inflicted these injuries with such nicety as not to soil her fingers with the blood which flowed profusely from her person. The worst of it is, that the officers of justice are by this inane kind of testimony, and the verdict it led to, impeded in their attempts to hunt out what appears to be, from Dr. Malcolm's letter, a common and most appalling kind of crime amongst the "old hags" of New South Wales.

GOVERNMENT PAYMENT TO CIVIL SURGEONS IN CHARGE OF TROOPS EMBARKING AT FOREIGN STATIONS.

It is much to be wished that the War Office authorities would decide on a rate of remuneration to be allowed to all civil Surgeons, both on home and foreign stations, who may be called on to take charge of sick soldiers. Hitherto we believe that the arrangement as to remuneration has been left to the Army Medical Officers, who, on the one hand, have, as in the case of Dr. Monat, noticed in our columns last week, been subjected to misrepresentation, or at least misconstruction, from civilians ignorant of the rules and requirements of the service; or who, on the other hand, may be themselves the sufferers if they neglect to settle beforehand on a rate of payment, and if the charges made are considered too high by the authorities. This objectionable state of things would be put an end to if the Government would decide on what they consider a reasonable rate of rumuneration, and make it generally known to the Profession, and it would then be for the civil Practitioner to accept or refuse the case on the specified terms as he may choose. At the same time Government would do well to consider that to be guided by a spirit of parsimony in this particular would be a mistaken economy. The best Medical advice is the cheapest; and, without being extravagantly high, the pay allowed should be such as would fully remunerate a respectable Practitioner for his time and skill. The following paragraph in reference to civil Surgeons having charge of troops embarked, appears under the head of Military Intelligence in the *Times* of October 1:—

"A notification has been received at Chatham garrison from the War Department to the effect that the Secretary for War has cancelled all circulars and orders at present in force respecting the rules of payment to be made by the War Office to civil Surgeons who, at foreign stations, are specially placed in charge of troops or military invalids embarked in vessels, other than contract mail packets, or vessels required either by Act of Parliament, or under the terms of the agreement with the Admiralty, to carry qualified Surgeons. An amended scale of rates has been fixed to apply in all future cases, and the Secretary of State desires that it may be understood that a civil Surgeon thus employed will have no claim to be provided with a passage back to the station at which he took over the Medical charge of the troops, nor to any sum beyond the prescribed scale for remuneration."

THE GORILLA CONTROVERSY IN AUSTRALIA.

The gorilla controversy has been imported into the Australian colonies, and has led to a considerable ebullition of the *odium Medico-theologicum* at Melbourne. Professor Halford, of the Melbourne University, delivered an oration before all the authorities of the colony, on the "Terminal Divisions of the Limbs of the Man and Monkey," in reply to Professor Huxley's work on the "Evidence as to Man's Place in Nature." He affirmed that the monkey is quadrumanous, or *cheiropodous*, and not bipid, like man; and pointed especial attention to the presence of flexors of the os metacarpi of the first toe and last digits in the hind limb of the monkey, and the want of the transversus pedis.

"In another portion of his lecture," says the *Melbourne Argus*, "Dr. Halford exclaimed—'Gentlemen, if any among you entered this theatre dreaming that you had any descent from creatures like these (pointing to a group of stuffed apes), banish the cursed nightmare from your minds at once. Awake, or be for ever lost. There can have been no gradual development from apes to man. Professor Huxley says we are certainly not of them, whether we are from them is the problem. I say we are not of them nor from them. We are different to these brutes, to whom nothing has been revealed, and from whom nothing is expected. I say (producing a portrait of Shakspeare), let us seek our relationship with beings of a higher order. "What a piece of work is man! How noble in reason! How infinite in faculties! In form and moving how express and admirable. In action, how like an angel! In apprehension, how like a god! The beauty of the world! The paragon of animals!"' This piece of claptrap in contrasting a bust of Shakspeare with a dead monkey, and quoting Hamlet's soliloquy on man, was not exactly discussing a great scientific question with the simple desire of arriving at the truth; and Professor Halford was guilty of a still greater breach of good taste, when, at the conclusion of his lecture he emphatically declared that Huxley's book 'might have been written by a devil.'"

On the following day the Professor is said to have had what is vulgarly called a *scrimmage* with one of the Huxleyian faction, and to have threatened to try physical force if orthodox argument failed; in plain English, he is said to have called him a d——d rogue, and to have threatened to knock him down. All this is to be regretted. As for the differences and resemblances between the physical structure of man and of the monkey, they are matters for cool, honest observation and description. Whatever they be, they are the work of God, and to be reverently studied. We cannot make them greater nor less, and it is absurd to get up a faction fight over them. That mind must be curiously framed which can imagine that any good to religion or morality can result from an endeavour to magnify the points of distinction, or to suppose that the stability of our faith depends on the structure of the sole of the foot. Equally absurd is it to mix up the argument derived from man's self-consciousness of his own dignity and of his superiority over the lower animals with that derived from anatomy. A man to whom it is *religio* to believe in the independent origin of mankind, could not be convinced by anatomical argument, even if it could be shown that the ape and the man are much more anatomically alike than they are.

The West Bromwich Murder.—Another of those purposeless murders which constitute the foremost difficulty in criminal jurisprudence has been committed at West Bromwich. A man named Holding was left by his wife for five minutes in the charge of their two children; in that time he took the lives of both the children by nearly severing their heads from their bodies. The evidence of the man's wife and mother strongly suggest insanity; he had always "doated" on his children. For some weeks before the occurrence he had been dull and desponding, and had suffered from tic douloureux, and one or two members of his family had been in an asylum. Immediately after the deed he went and told his mother what he had done, adding "that he wanted to see his little children go to heaven before him."

ASPHYXIA.

In 1857, the *Medical Times and Gazette* assisted the Royal National Life-boat Institution in eliciting the opinions of the Medical Profession on the relative merits of the plans for the restoration of the apparently dead from drowning, of the eminent physiologist, the late Dr. Marshall Hall, and the Royal Humane Society of London. The result was that the favourable opinions of the principal Medical bodies and of 300 Medical men in this country, as also those of the chief Medical bodies on the Continent, were obtained by the Royal National Life-boat Institution in favour of Dr. Marshall Hall's plan. These directions were then at once extensively circulated by the Institution throughout the United Kingdom and in the colonies. They are also in use in Her Majesty's fleet.

Last year some important investigations were made by the Royal Medical and Chirurgical Society on the relative merits of the plans of Dr. Marshall Hall and Dr. H. R. Silvester for restoring suspended animation. The result was decidedly in favour of Dr. Silvester's method, which, in principle, is now adopted by the Royal Humane Society.

Under these circumstances, the National Life-boat Institution is naturally anxious to elicit the opinion of the Medical Profession generally on the relative merits of the two plans, and we readily give insertion to the following circular of the Institution on the subject, feeling assured that those of our readers who have had experience in cases of asphyxia will render every help in their power to the Life-boat Institution in arriving at a correct conclusion on so vital a matter.

" Royal National Life-boat Institution, 14, John-street,
" Adelphi, London, September, 1863.

" Sir,—I am instructed to acquaint you that until the year 1857, the Rules of the Royal Humane Society of London, for the restoration of the apparently drowned, were circulated by this Institution at its life-boat stations on the coasts of the United Kingdom; but in that year the eminent physiologist, the late Dr. Marshall Hall, having pronounced the rules to be wrong, the Committee of the Royal National Life-boat Institution obtained, as far as they were able, the opinions of the chief Medical authorities in this country, and of some on the Continent, on the relative merits of the two systems.

"Those opinions were so generally, indeed almost exclusively, in favour of Dr. M. Hall's plan, that the Committee felt they had no option but to modify the rules, for the circulation of which they were responsible, in accordance with it.

" Since that period, Dr. Henry Robert Silvester, of London, has proposed a modification of the rules of Dr. Marshall Hall, which, although synonymous in principle, uses a different mode of promoting artificial respiration, which he alleges to be more convenient, and to more effectually perform the same.

"Dr. Silvester's plan has been carefully considered and favourably reported on by the 'Royal Medical and Chirurgical Society of London,' and has been recently adopted by the Royal Humane Society in lieu of their previous rules.

" The Committee of the Royal National Life-boat Institution, not being a Medical body, and feeling the serious inconvenience of there being two different plans in circulation which might lead to hesitation and delay, where decision and promptness of treatment are all-important, are desirous once more to have the advantage of the opinions of the chief Medical authorities in this country on the subject.

"I am therefore directed to solicit the favour of your opinion on the relative suitableness of the two systems of Dr. M. Hall and Dr. Silvester, as embodied in the rules of this Institution, and of the Royal Humane Society, copies of which are herewith annexed, in order that the present rules of this Institution, founded on Dr. M. Hall's plan, should, if necessary, be modified, or those of the Royal Humane Society be adopted in lieu of them.

"I am, Sir,
" Richard Lewis, Secretary.
" Royal National Life-boat Institution."

"ROYAL NATIONAL LIFE-BOAT INSTITUTION.

" DIRECTIONS FOR RESTORING THE APPARENTLY DROWNED.

" *The leading principles of the following Instructions are those of the late Dr.* Marshall Hall *for the Restoration of the apparently Dead from Drowning, and are the results of the latest discoveries:—*

" Send immediately for Medical assistance, blankets, and dry clothing, but proceed to treat the patient *instantly* on the spot, in the open air, whether on shore or afloat.

" The points to be aimed at are, *first* and *immediately*, the RESTORATION OF BREATHING and the PREVENTION of any further DIMINUTION of the WARMTH of the BODY; and *secondly*, after *breathing* is *restored*, the PROMOTION OF WARMTH AND CIRCULATION.

" The efforts to *restore Breathing*, and to *prevent* any further *diminution* of the *warmth* of the *body* must be commenced immediately and energetically, and must be persevered in for several hours, or until a Medical man has pronounced that life is extinct. Efforts to promote *Warmth* and *Circulation* must be deferred until natural breathing has been restored.

" TO RESTORE BREATHING.

" *To Clear the Throat*—

" 1. Place the patient on the floor or ground with his face downwards, and one of his arms under the forehead, in which position all fluids will escape by the mouth, and the tongue itself will fall forward, leaving the entrance into the windpipe free. Assist this operation by wiping and cleansing the mouth.

" 2. If satisfactory breathing commences, adopt the treatment described on the next page to promote warmth and natural breathing. If there be only slight breathing—or no breathing, or if it fail, then—

" *To Excite Breathing*—

" 3. Turn the patient well and instantly on the side, and—

" 4. Excite the nostrils with snuff, hartshorn, and smelling salts, or tickle the throat with a feather, etc., if they are at hand. Rub the chest and face warm, and dash cold water on it.

" 5. If there be no success, lose not a moment but instantly

" *To Imitate Breathing*—

"6. Replace the patient on the face, raising and supporting the chest well on a folded coat or other article of dress.

" 7. Turn the body very gently on the side and a little beyond, and then briskly on the face, back again; repeating these measures deliberately, efficiently, and perseveringly about fifteen times in the minute, or once every four seconds, occasionally varying the side:
[*by placing the patient on the chest, the weight of the body forces the air out; when turned on the side, this pressure is removed, and air enters the chest.*]

" 8. On each occasion that the body is replaced on the face make uniform but efficient pressure with brisk movement, on the back between and below the shoulder-blades or bones on each side, removing the pressure immediately before turning the body on the side:
[*the first measure increases the expiration, the second commences inspiration.*]

" ⁂ The result is *respiration* or *natural breathing;*—and, if not too late, *life*.

" CAUTIONS.

" 1. Be particularly careful to prevent persons crowding round the body

TO PREVENT ANY FURTHER DIMINUTION OF WARMTH.

N.B.—These efforts must be made very cautiously, and must not be such as to promote *warmth* and *circulation rapidly;* for if circulation is induced before breathing has been restored, the life of the patient will be endangered. No other effect, therefore, should be sought from them, than the prevention of evaporation, and its result, the diminution of the warmth of the body.

" 1. Expose the face, neck, and chest, except in severe weather (such as heavy rain, frost, or snow).

" 2. Dry the face, neck, and chest, as soon as possible with handkerchiefs, or anything at hand; and then dry the hands and feet.

" 3. As soon as a blanket or other covering can be obtained, strip the body; but if no covering can be immediately procured, take dry clothing from the bystanders, dry and re-clothe the body, taking care not to interfere with the efforts to restore breathing.

" CAUTIONS.

" 1. Do *not* roll the body on casks.

" 2. Do *not* rub the body with salts or spirits.

" 3. Do *not* inject tobacco-smoke or infusion of tobacco.

"2. Avoid all rough usage and turning the body on the back.

"3. Under no circumstances hold the body up by the feet.

"4. Do *not* place the patient in a warm bath.

"N.B.—The directions are printed in parallel columns to avoid confusion, and to ensure that the efforts to obtain both objects shall be carried on at the same time.

"TREATMENT AFTER NATURAL BREATHING HAS BEEN
"RESTORED.

"TO PROMOTE WARMTH AND CIRCULATION.

"1. Commence rubbing the limbs upwards, with firm grasping pressure and energy, using handkerchiefs, flannels, etc.; [*by this measure the blood is propelled along the veins towards the heart.*]

"The friction must be continued under the blanket or over the dry clothing.

"2. Promote the warmth of the body by the application of hot flannels, bottles, or bladders of hot water, heated bricks, etc., to the pit of the stomach, the arm-pits, between the thighs, and to the soles of the feet.

"3. If the patient has been carried to a house after respiration has been restored, be careful to let the air play freely about the room.

"4. On the restoration of life, a teaspoonful of warm water should be given; and then, if the power of swallowing have returned, small quantities of wine, warm brandy and water, or coffee, should be administered. The patient should be kept in bed, and a disposition to sleep encouraged.

"GENERAL OBSERVATIONS.

"The above treatment should be persevered in for several hours, as it is an erroneous opinion that persons are irrecoverable because life does not soon make its appearance, cases having been successfully treated after persevering for many hours.

"APPEARANCES WHICH GENERALLY ACCOMPANY DEATH.

"Breathing and the heart's action cease entirely; the eyelids are generally half-closed; the pupils dilated; the jaws clenched; the fingers semi-contracted; the tongue approaches to the under edges of the lips, and these, as well as the nostrils, are covered with a frothy mucus. Coldness and pallor of surface increase."

"ROYAL HUMANE SOCIETY'S INSTRUCTIONS.

"DIRECTIONS FOR RESTORING THE APPARENTLY DEAD.

"I.—IF FROM DROWNING OR OTHER SUFFOCATION, OR NARCOTIC POISONING. — Send immediately for Medical Assistance, Blankets, and Dry Clothing, but proceed to treat the patient INSTANTLY, securing as much fresh air as possible.

"The points to be aimed at are—first and immediately, the RESTORATION OF BREATHING; and secondly, after breathing is restored, the PROMOTION OF WARMTH AND CIRCULATION.

"The efforts to restore life must be persevered in until the arrival of Medical Assistance, or until the pulse and breathing have ceased for at least an hour.

"TREATMENT TO RESTORE NATURAL BREATHING.

"RULE 1.—TO MAINTAIN A FREE ENTRANCE OF AIR INTO THE WINDPIPE.—Cleanse the mouth and nostrils; open the mouth; draw forward the Patient's tongue, and keep it forward: an elastic band over the tongue and under the chin will answer this purpose. Remove all tight clothing from about the neck and chest.

"RULE 2.—TO ADJUST THE PATIENT'S POSITION.—Place the Patient on his back on a flat surface, inclined a little from the feet upwards; raise and support the head and shoulders on a small firm cushion or folded article of dress placed under the shoulder-blades.

"RULE 3.—TO IMITATE THE MOVEMENTS OF BREATHING.—Grasp the Patient's arms just above the elbows, and draw the arms gently and steadily upwards, until they meet above the head (this is for the purpose of drawing air into the lungs); and keep the arms in that position for two seconds. Then turn down the Patient's arms, and press them gently and firmly for two seconds against the sides of the chest (this is with the object of pressing air out of the lungs. Pressure on the breast-bone will aid this).

"Repeat these measures alternately, deliberately, and perseveringly, fifteen times in a minute, until a spontaneous effort to respire is perceived, immediately upon which cease to imitate the movements of breathing, and proceed to INDUCE CIRCULATION AND WARMTH (*as below*).

"Should a warm bath be procurable, the body may be placed in it up to the neck, continuing to imitate the movements of breathing. Raise the body in twenty seconds in a sitting position, and dash cold water against the chest and face, and pass ammonia under the nose. The patient should not be kept in the warm bath longer than five or six minutes.

"RULE 4.—TO EXCITE INSPIRATION.—During the employment of the above method excite the nostrils with snuff or smelling-salts, or tickle the throat with a feather. Rub the chest and face briskly, and dash cold and hot water alternately on them.

"⁂ The above directions are chiefly Dr. H. R. SILVESTER's method of restoring the apparently Dead or Drowned, and have been approved by the Royal Medical and Chirurgical Society.

"TREATMENT AFTER NATURAL BREATHING HAS BEEN
"RESTORED.

"RULE 5.—TO INDUCE CIRCULATION AND WARMTH.—Wrap the Patient in dry blankets and commence rubbing the limbs upwards, firmly and energetically. The friction must be continued under the blankets or over the dry clothing.

"Promote the warmth of the body by the application of hot flannels, bottles, or bladders of hot water, heated bricks, etc., to the pit of the stomach, the armpits, between the thighs, and to the soles of the feet. Warm clothing may generally be obtained from bystanders.

"On the restoration of life, when the power of swallowing has returned, a teaspoonful of warm water, small quantities of wine, warm brandy-and-water, or coffee should be given. The Patient should be kept in bed, and a disposition to sleep encouraged. During reaction large mustard-plasters to the chest and below the shoulders will greatly relieve the distressed breathing.

"II. IF FROM INTENSE COLD.—Rub the body with snow, ice, or cold water. Restore warmth by slow degrees. In these accidents it is highly dangerous to apply heat too early.

"III. IF FROM INTOXICATION.—Lay the individual on his side on a bed with his head raised. The Patient should be induced to vomit. Stimulants should be avoided.

"IV. IF FROM APOPLEXY OR SUN-STROKE.—Cold should be applied to the head, which should be kept well raised. Tight clothing should be removed from the neck and chest.

"APPEARANCES WHICH GENERALLY INDICATE DEATH.

"There is no breathing or heart's action; the eyelids are generally half-closed; the pupils dilated; the jaws clenched; the fingers semi-contracted; the tongue appearing between the teeth, and the mouth and nostrils are covered with a frothy mucus. Coldness and pallor of surface increases."

THE MEETING OF THE BRITISH ASSOCIATION AT NEWCASTLE.

(FOURTH NOTICE.)

(*From our Special Correspondent.*)

JAMES SAMUELSON, ESQ.,

On Life in the Atmosphere.

No subject in natural history, he remarked, except the allied one, the origin of species, had of late excited greater interest in the scientific world than the origin of the lowest types of living beings on the globe; and although the problem was far from being solved, yet the investigations that had accompanied the discussion had already served the useful purpose of throwing new light on the anatomy and life history of the mysterious little forms of which it treated. It was rather with the latter object, than in the expectation of being able to assist in the solution of the general question, that he ventured to lay before the Association the results of investigations recently made. He had, for example, taken rags imported from various countries, and shaken the dust from them into distilled water, which he then exposed to the atmosphere; and, after describing generally the character of the living forms he had discovered in this pure water, he stated in detail the forms of life found in each kind of dust, and among these were some new species of Rhizopoda and Infusoria, and an interesting ciliated worm-shaped form, which he believed to be a collection of the larvæ of some other infusoria. The general results of the microscopical examination of these fluids between the 27th of July and 15th of August was as follows:—In the dust of Egypt, Japan, Melbourne, and

Trieste, life was the most abundant, and the development of the different forms was rapid. In conclusion, he observed that if he was correct in supposing the germs of the living forms that he had described to be present in the dust conveyed by the atmosphere, and in distilled water, it was worthy of notice that these germs retain vitality for a long period,—a period of which he could not pretend to define the limit. In his experiments they outlived the heat of a tropical sun, and the dryness of a warm room during the whole winter; but in Dr. Pouchet's case they retained their life 2000 years, for he obtained his from the interior of the pyramids of Egypt, and then survived an oil of 400 degrees of heat. A main purpose which Mr. Samuelson had in view was to disprove the theory of spontaneous generation; and he suggested whether the great rapidity with which these germs are multiplied might not account for the spread of epidemic diseases. He did not profess to have any acquaintance with such diseases, but might it not be desirable to subject the atmosphere of Hospitals to the microscopic test?

EDWARD SMITH, M.D., F.R.S., LONDON.

On the Dietary of the Lancashire Operatives.

Dr. Smith read the above-named paper in sub-Section D, on Tuesday, September 1. The paper offered a concise and excellent epitome of the reports which were recently presented to the Privy Council. A list of dietaries was supplied, and various hints of a practical and economic character were brought forward. A discussion followed, in which several members took part.

The President said that in lecturing to the upper classes he taught that they ought to be sparing in their diet; and they, thinking that the greater included the less, applied the principle to their children, until the poor things were nearly starved. To growing children too much food could not be given. With reference to scurvy, he gave an instance in which a friend of his while in the arctic regions was attacked with scurvy, and after all the known remedies had failed, he was cured by drinking the warm blood of a reindeer which he had killed.

Dr. De May said an abundant use of sugar had been found a most successful cure for scurvy of the worst description.

Several members hoped the dietaries which Dr. Smith had given should be published.

On the Dietary of the Labouring Classes.

In this paper, which was also read on Tuesday, Dr. Smith endeavoured to show the largest amount of food which could be provided by the smallest amount of money—which would give a breakfast for 1½d., dinner for 2d., and tea for 1d., and which would give nothing but what was required by the system. It was important, especially to the working classes, to know what dietary was cheaper than another. He would first take bread, which must be the basis of diets. A pound of bread gave 2000 grains of carbon, and 70 grains of nitrogen; this was from ordinary household flour. In baking, in point of economy, it was immaterial whether bread was baked by the consumer or bought ready baked. He had a strong conviction that brown bread was the rich man's dietary, and not the poor man's, as was generally supposed. Where the object was to supply the largest amount of nutrition at the smallest amount of cost, in that case the brown bread was not the diet of the poor man, and that was fully proved by the experience of the country, white bread being the bread of the poor man. Brown bread was generally supposed to be the more nutritious, arising from a statement by Liebig, that there was in the husk of the brown bread more nitrogen than in the white, and it was said when you take away the husk you take away the nutritious part. But the error arose through not considering whether the husk was digested, and it was now proved beyond doubt that it was not digested, and therefore it is entirely lost. Brown bread was also laxative, and had a wasting effect. Ordinary household flour had as much nutrition as the best flour, which was only whitened. Oatmeal was not more nutritious than white flour, and peas, from containing a large quantity of nitrogen, was an excellent addition to bread, split peas being best, as the skins were not digested. Rice, if it could be obtained at a penny a pound, was a cheap good article of diet. Fresh vegetables, where good bread could be obtained and fresh meat, were not so essentially necessary as was generally supposed. Potatoes were the dearest of all the food supplied to the poor, and this ought to be considered by people who had the supplying of food to them. He spoke of the value of bones, and said that while the gelatine obtained from them was not sufficient to sustain life, bones were still very valuable as articles of nutrition, one pound of bones containing as much nutrition as half a pound of bread. Liver was an important addition to the poor man's food, providing it could be got free from fat, and was well cooked. It gave a larger amount of nitrogen than any other kind of meat. New, skimmed milk, or butter milk were all excellent for the dietaries of the poor, and he thought it was a fact worth knowing that skim milk, in view of its nutritious qualities, was the cheapest food that could possibly be obtained. Tea and coffee were not so nutritious as had been supposed.

WILLIAM TURNER, M.B., F.R.S.E., EDINBURGH,

On Cranial Deformities, more especially on the Scaphocephalic Skull.

Mr. Turner, who read on Tuesday, September 1, in sub-Section D, commenced by stating that deformities of the skull might be occasioned by artificial means, by posthumous changes, by pathological changes, and by developmental irregularities and deficiencies. He in a great measure restricted himself to the consideration of the influence which premature or retarded synostosis may exercise in the production of abnormal cranial forms. He arranged the sections of the skull-cap into a vertical-transverse group, a median longitudinal and two lateral longitudinal, and, carrying out the important proposition first clearly enunciated by Professor Virchow, he pointed out that if a premature ossification takes place in one or more than one of the whole or a part of a suture, then, necessarily, the growth of the skull corresponding to and in a direction perpendicular to the line of synostosis will occur, and diminished length or breadth, or height, as the case may be, will be occasioned. He then illustrated this proposition by describing the peculiarly elongated and laterally compressed form of skull to which Professor Von Baer, of St. Petersburg, has given the name of Scaphocephulus. The whole of these crania agreed in possessing the following characters: Absence of sagittal suture and consequent blending of the two parietal bones, absence of parietal eminences, lateral compression, great elongation. He then described at length the theories which had been advanced in explanation of these characters. The first proposed by Minchin, and adopted by Von Baer, supposes that the bi-parietal bone is developed from a single median vertical centre. The second, proposed by Virchow, and concurred in by the author, supposes the two bones to have been formed in the usual way, each from its own centre, but that at a very early period they coalesced along the sagittal line so as to form but a single bone. The author then directed attention to the importance of attending to the above proposition in ethnological inquiry, and suggested that various aberrant forms of skull, occurring in individuals of any given nationality, possessing a shape quite different from that of the race to which they belong, might be thus explained. He pointed out, moreover, that obliteration of the sutures was not unfrequently met with in the skulls of the Flathead Indians which had been artificially flattened. He was of opinion that premature synostosis did not necessarily occasion any disorder of the faculties of the mind, or any tendency to cerebral disease. Persons possessing crania of this form do not belong to any particular race, neither do they exhibit any special tendency to cerebral disease or mental incapacity.

(To be concluded.)

HYDRIODATE OF POTASSIUM IN ENGORGEMENT OF THE BREASTS IN PUERPERAL WOMEN.—Dr. Billi, Obstetrical Professor at Milan, gives in this paper an account of the results of his employment of the hydriodate during twenty months at the Milan Lying-in Hospital. During this time 773 women were admitted, most of them robust primaparæ. Several not suckling their children suffered from engorgement of the breasts, and the best means of relieving this was found to be administering hydriod. pot., gr. vii. to ix., dissolved in water, and divided into four or five doses during the twenty-four hours. In uncomplicated cases this had to be continued for two or three days, and for a somewhat longer time when induration of some of the lobes existed. When there was decided mastitis present, emollient cataplasms were also applied, after anointing the breast with eight parts of ext. of belladonna and twenty-four of glycerine. The external application of the hydriodate was found to act much less promptly than when it was given internally.—*Omodei Annali.*

REVIEWS.

Prize Essays on Physical Education. (Athletic Society). 1. By Luke O. Pike, M.A., and 2. By Lord William Lennox, to whom was awarded the Silver Medal of the above Society. London: Longman and Co. 1863.

The first writer, who has produced a dish savouring about equally of the school theme and the magazine article, shows that "indoor life with abundant exercise conduces more to longevity than outdoor life without it." Shakespear, Madame de Stael, Mr. Charles Kingsley, the author of "Ten Thousand a Year," Pope, Byron, African savages, Alexander the Great, Aristotle, Herodotus, Humboldt, Crœsus, Mr. Neison, the "Encyclopædia Britannica," and other celebrities innumerable all figure within the brief space of forty pages.

Lord William Lennox introduces us in addition to Xenophon, Locke, Rousseau, Campe, Basedow, Pestalozzi, Saltzman, Fellenberg, Voelker, Jahn, "the Rev. Hugh Stowell Brown, of Liverpool," Achilles, a Chinese mandarin, Queen Elizabeth, the Ludi Circenses, the Rev. Mr. Bellew, Galen, and George III.

Rowland Evans contributes a third Essay, which although in some respects the best of the set, appears only to have obtained the bronze medal, and is condemned to small type.

Lastly, an account of "the Olympic Festival at Mount Vernon, Liverpool," concludes the work. No doubt the Society is useful and sensible, especially for inhabitants of a great commercial metropolis, but its literary adornments are slightly comic.

On Diseases, Injuries, and Malformations of the Rectum and Anus. By T. J. Ashton, M.R.C.S.E. Fourth Edition. London: John Churchill and Sons. 1863.

A new edition of a work which has, on former occasions, been favourably spoken of in this country and elsewhere. The author states that the present edition has been carefully revised, some portions re-written, with the addition of further observations and cases.

It is a very elaborate and minute account of a class of disorders now established as a recognised specialty.

Mentone in its Medical Aspect. By James L. Siordet, M.B. London: John Churchill and Sons. 1863.

A series of five letters, and an appendix of meteorological observations, written by a Medical man to a friend at home. It may be inferred from the dedication that Dr. Siordet has the results of his own personal experience to add to that of other invalids. Instructions are given in economical matters, which would be valuable to any intending visitor.

GENERAL CORRESPONDENCE.

THE CASE OF THE BANK CLERK ALLEGED TO HAVE BEEN MURDERED.

Letter from Dr. James Edmunds.

[To the Editor of the Medical Times and Gazette.]

Sir,—I send the following report of the examination of a body found in the Thames, being that of a bank clerk alleged to have been murdered. I have also appended a few remarks upon the recognition of the dead:—

On the 11th inst. I was requested by Mr. J. Humphreys to examine a corpse which at a preliminary inquest had been identified as the remains of Mr. H. D. Morris, a gentleman who had disappeared on the night of the 3rd under circumstances of great mystery and suspicion. When I saw the body it had been out of the water about fifty hours; the face was quite black, and its features were almost effaced by gaseous emphysema. Around the eyes, especially on the right side, the tumefaction and discoloration were particularly striking, and these "black eyes" had attracted notice when the body was first removed from the water, although its general surface was then but little changed, and they were supposed to be the marks of violence which had been inflicted in connexion with the cause of death. It was therefore of great importance to determine this point if possible.

My observations in these cases go to show that discoloration and emphysema proceed directly in proportion to the facility with which air and moisture gain access to the tissues, and this process will be governed chiefly by the completeness with which the body is covered by water, but also in part by the nature of the clothing and the thinness of the skin. In this case the man who found the body proved that the back of the shoulders, the nape of the neck, and the back part of the head floated uppermost, while the rest of the body was deep in the water; and those parts which, according to this circumstance, would have been most freely exposed to the air were proportionately the most changed, and especially in regard to colour. Just in proportion, also, as the body had been least effectually covered with clothing was the depth of discoloration. The face was absolutely black, the neck and shoulders mottled with black and green, the abdomen paler and mixed with vesications and patches of unchanged surface; while the feet, on which the boots and stockings still remained, were found to be quite natural in appearance.

The thinness of the skin acts in two ways: firstly, before the body "comes up," the greater distensibility of thin integuments allows the gases to accumulate more largely beneath the surface of such parts as the penis and scrotum than beneath more resistent neighbouring structures, although, in consequence of non-exposure to air, no discoloration may have occurred; secondly, where there is an alternating exposure to air and to water, such as the action of the waves would produce on the face of a body floating as this one did, then the blackening proceeds more rapidly around the eyes than elsewhere, and this because the thinness and porosity of the skin facilitates the action of the air on the subjacent substances; but after removal from the water, then those parts which do not retain a large amount of moisture may become surface-dried, and discoloration be retarded. Hence, in this case the face, especially around the eyes, was absolutely black and largely swollen, while the penis and scrotum, though enormously distended, were unchanged in colour, their yielding texture having allowed gases to accumulate before the access of air, while their exposed surface afterwards became too dry for the reaction between the air and their subcutaneous substances, and the colorific changes were therefore comparatively arrested.

It remained to explain why the right eyelids were so much more changed than the left? There being no diversity of anatomical structure, did not the more advanced stage of decomposition indicate the additional element of ante-mortem violence? 1st. There was no evidence of injury about the integuments, and although these only afforded negative evidence, yet the uninjured state of the skull and of the membranes of the brain positively disproved anything like severe violence. 2ndly. Accidental bruising would most probably occur to some part of the body, and this especially about the knees or one of the eyes, and to an extent which, without implying or in any way proving homicidal violence, would be quite sufficient to determine more rapid change at such points. 3rdly. The greater blackening around one eye might have been produced after the body "came up," by its floating on one side sufficiently to expose that part more freely to the air.

It was therefore concluded that no opinion upon the point could be arrived at, and that in this case Medical science could not differentiate results compounded of post-mortem decomposition and contusion about the time of death, from the results of such a stage of decomposition alone. The negative evidence, however, was put strongly as inclining to the belief that he had sustained no homicidal violence, although when his brother asked me "if he might not have been made insensible by a blow on the head with a sand-bag," I of course said that he might. In another late notorious case just such a body was believed to be that of the St. Giles's murderer, and this belief rested upon a presumed recognition of the clothing, as the body itself was utterly unrecognisable. My friend Dr. B. W. Richardson suggested to me the idea of disinfecting and bleaching this body, so as to restore its appearance, and this idea was jointly worked out and applied by Dr. Richardson and myself with such an amount of success that those witnesses who had previously been unable to say anything about the body were able to swear positively that he was not the man, and thus disprove the presumed identity. In the present case the clothing and other articles had led to prompt recognition of the body, and there was no question of this sort, yet in pursuance of certain observations on the recognition of the dead, and in order to diminish the offensiveness and danger of the investigation, the following treatment was applied:—

The body was placed in a sound, well-painted shell, together with sufficient water to cover it, and three pints of common hydrochloric acid, and a little chloride of lime. Bricks were then placed upon the body until their weight sunk it completely, and the lid of the shell having been adjusted, two half hundred weights were placed thereon, so as to maintain the arrangement until next morning. We then found that the solution had improved the colour, lessened the distension, and removed all offensiveness. The muscles were of a bright red colour, and the body altogether unobjectionable, but there was no revealment of any further explanation as to the appearances to which I have alluded; nevertheless, I think that such a process may be made useful in this respect in certain cases.

I referred to danger, as I myself had but imperfectly recovered from an attack of erysipelas of the head and face and severe febrile disturbance, which had occurred to me after the other case to which I have alluded, and which illness I believe was derived therefrom. As I rode home from that examination, my hands having been but imperfectly cleansed, I demolished a small pimple on the lobe of the left ear by pinching it with my fingers, and at this spot erysipelas commenced five days afterwards, and it not only threw me out of work for two months, but, had it not been for the skill and unremitting kindness of Mr. Hutchinson and Dr. Peacock, would probably have made an end of me. This "improvement" was therefore much appreciated, and I beg to recommend the general adoption of so simple and practicable a means of securing the comfort and safety of the Medical examiners. It is here due to Mr. Gay to mention that at the inquest on this former case I saw a letter from him to the coroner, in which the principle of the process which we had based upon Dr. Richardson's idea had been independently suggested, without, however, alluding to treatment by injection of the vessels.

The facts of the post-mortem have been so accurately narrated in the last number of the journal, that I will now only summarise their leading points.

The lungs, general venous system, and right side of the heart were gorged with blood, while the left side of the heart was quite empty.

About 4 oz. of bloody fluid was found in the pericardium, and about a pint in each pleura. There were no marks of pressure about the neck, but the larynx contained slimy mud, which extended through into the smaller air-tubes.

There was no evidence of injury to the head—no scratching of the finger ends (as from struggling in contact with a hard bottom), and no water or mud had been swallowed.

The stomach contained an ounce or two of undiluted vinous fluid, with the odour of champagne, a little pulpy cheese, together with some undigested fragments of onion, gherkin, and apple.

The duodenum contained no food. The bladder was empty.

We concluded—

"That he was suffocated by drowning, and probably while in a state of insensibility.

"That death occurred within one, or at most two hours after the meal he had taken with his friends.

"That there was no evidence of homicidal violence on the body.

"That the bladder might have been voluntarily emptied just before death, or involuntarily during the death struggle."

These conclusions were put forward, not as irresistible, but as reliable in the absence of rebutting evidence. Assuming them to be correct, what was the cause of the insensibility, and how did he get into the water? The landlord of the house he had left said "he could not say the deceased was quite sober; he was what some people would call a little jolly, but was not intoxicated; he could walk straight, and was quite capable of taking care of himself;" and his friends generally discredited the idea of drunkenness.

The alternative causes are a blow on the head or a narcotic poison. Now, it would need a most severe blow on the head to stun a vigorous young man so much as to cause him to draw muddy water unresistingly into the lungs without swallowing a drop of it; and any such blow seems to me to be negatived by the state of the head, unless indeed a sand-bag had been used for the purpose (as was suggested by his brother at the inquest); but this would involve a refinement of murder which was most unlikely under the circumstances. Again, there was no evidence, by smell or otherwise, of any narcotic poison in the stomach; while the contents almost demonstrated that he had swallowed nothing since the meal which his friends witnessed.

It is, however, within the observation of most of us that champagne, under certain conditions and in full doses, is very liable to act as a narcotic. Now, the existence of undiluted wine in the stomach ten days after death seems to me to imply either that the blood had been pretty well saturated with alcohol, or that he died within a few minutes after he left the Ticket-Porter Tavern. It is in evidence that he suddenly started up, and left to catch the train at the other end of London Bridge. What more likely than that he emptied his glass on starting, and that, having already drank freely of wine on a comparatively empty stomach, the two hundred yards' quick walking should have so accelerated his circulation as to develope narcotic effects by the time he reached the foot of the bridge. Here, intending to find the covenience half-way down the steps, he fumbled down in the dark, went too far, slipped into the twelve feet of water, and was drowning while his friends were looking for him.

On the Recognition of the Dead.—In consequence of illness I have only just read Dr. Richardson's admirable report upon the case to which I have already alluded (published in a contemporary on May 16) and I shall be glad to append a few remarks on this interesting subject.

Decomposition alters the appearance of a body in two ways, and I am not aware that drowned bodies are at all peculiar in their manifestations of these results.

1st. The features become masked by a black colour. This coloration seems to be associated with exposure to air in the presence of moisture, and it may be produced—*α*. By some organic colouring matter derived from changes in the hæmatine; *β*. By a black sulphide of iron formed in the substance of the skin from the reactions between newly-formed sulphides in excess and the iron of the broken-down blood.

2ndly. The skin becomes so distended that the features are mechanically bloated, and their finer lineaments are altogether effaced.

This change appears to me to be due solely to gaseous emphysema, the result of decomposition; but Dr. Richardson seems to ascribe it to the imbibition of water, and his ingenious process is principally designed to remove this supposed water by the osmotic effect of soaking the body in a dense solution of salt. Dr. Richardson's supposition, however, is not borne out by the following considerations:—

Drowned bodies seem to "come up" in consequence of the evolution of gas in the superficial areolar tissue, or, in cases where the stomach contains fermentable food, they rise before this occurs, in consequence of the evolution of gas in the intestines; and these circumstances will determine the posture in which the body floats upon the surface, and the parts which first become exposed to the atmosphere. Again, the bodies on first floating are perfectly recognisable, and are neither discoloured nor materially swollen, but on exposure to the air they rapidly darken and swell, and in about sixty hours (more or less, according to the weather) the surface is quite black, and the skin so tense that, when punctured, a stream of offensive gas rushes forth with a hissing noise. In bodies also which have never been in water, precisely the same series of conditions occur. Moreover, in the very case upon which Dr. Richardson's paper is based, the use of the salt was understood by me to be rather as a sweetening ingredient in conjunction with the muriatic acid, than as an osmotic desiccator.

I will not now ask leave to discuss these questions further, as it would swell this paper to an inconvenient length. I have merely attempted to indicate the points on which observations seem to be needed, and will in a future paper again try to deal with the subject. Correct collateral details of Mr. Morris's case will be found in the *Times* of September 12, 19, 24, and 26.

I have to acknowledge the valuable advice and assistance, in this examination, of my friends Mr. J. M. Wills, Dr. Tandy, and Mr. W. P. Dukes.

I am, &c.
James Edmunds, M.D.

35, Finsbury-circus, September 28.

R

GALVANISM IN POISONING BY OPIUM.

Letter from Dr. Ogle.

[To the Editor of the Medical Times and Gazette.]

Sir,—The notice in this day's Number of your periodical headed "Cold Affusions in Narcotic Poisoning" in which a most interesting case of Dr. Harley's is recounted, calls to my mind one in which galvanism was used with similar success; one in which I assisted, and of which I made short notes at the time, which are, I think, of interest. The case occurred at St. George's Hospital, November 28, 1851, and was as follows:—

The patient, a child, aged seven months, had a quantity of laudanum given to it (it was said that a spoonful had been given, but it could not be accurately made out what sized spoon had been used) at half-past nine a.m. It was brought to St. George's Hospital at twelve o'clock at noon in a comatose condition, with perfectly livid lips, pallid face, almost icy coldness of all the extremities, and very contracted pupils. There was, however, no stertorous breathing. The fontanelles were in a natural state. The child was put into a series of warm baths, and very cold water was repeatedly dashed upon the whole of its naked body. This alternate use of hot water and cold water was continued for some time, with the effect of rousing the child and making it cry, but it very quickly relapsed after each effort into its former condition, until the "douching" was repeated. At times the child would take the breast during this comatose state, but only for a few minutes. After persevering in the use of the hot bath and the cold affusions for above an hour, no decided advantage being apparently gained, but, on the contrary, this mode of treatment losing its power in rousing the patient, it was determined to try the use of galvanism. This was begun and persevered in with most decided benefit. By its means the crying was kept up at intervals, and the general circulation roused from time to time. The good result continued, and the galvanism was persisted in until half-past six o'clock in the evening, when, to the delight of the mother, who had, against the advice of all about, watched with the utmost anxiety the seemingly painful use of the affusion and galvanism, the patient opened its eyes in a languid, but otherwise natural manner, and gradually revived. After taking food, and looking about it for a time, it fell into a deep, but quiet and healthful sleep, in which it long remained. It was fully restored to its ordinary state after a time, and removed home by the mother.

The galvanism was kept up remittingly by relays of Medical students, who very promptly lent themselves to the work.

It was observed that galvanism across the cheeks caused most crying and arousing of the child's energies; that along the back most writhing and contortions. When applied across the thorax, from side to side, it appeared that most sobbing with crying was produced, and when along the line of the diaphragm much sobbing, but not crying.

It was noticed, during the comatose condition of the child, that frequently one-half of the lips and mouth would become much paler than the remainder, which was very dark and livid, the darkness gradually passing off, like the fading away of a shadow. (a)

I am, &c.
John W. Ogle, M.D., F.R.C.P.
13, Upper Brook-street, W., September 26.

MEDICAL NEWS.

University Intelligence.—University of Durham September 25, 1863.—The following candidates have passed the Medical Registration Examination:—

Andrew Aitchison, John Pitney Aston, Albert H. Baines, Wilmer Chorley, H. A. Crosthwaite, W. S. Davison, R. E. Deane, W. Dodds, W. Easby, J. H. Gornall, James A. Hall, F. S. Higgs, William Kipling, W. H. Middleton, R. C. Newton, Robert Ostlere, J. S. Parkinson, E. A. Phillips, Peter Ryder, John Taylor, G. E. W. Turner, Robert Wilkinson, C. W. Wood, and W. Worthington.—F. F. Walroud and J. Dixon Hepple, Examiners.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, September 24, 1863:—

Arthur Tuxford, Boston, Lincolnshire; Edmund Vallance, Brighton; Joseph Peeke Richards, Oxford-terrace, Islington; David Maurice Serjeant, Queen's-road, St. John's-wood, N.W.

The following gentleman also on the same day passed his First Examination:—

James Thomas McMahon, Charing cross Hospital.

Preliminary Examination in Arts. — The following gentlemen passed the Preliminary Examination in Arts at the Hall on September 25 and 26, 1863, viz.:—

Samuel Alford, Taunton; Arthur Andrews, Hertford; S. C. Austin, Bildeston; Samuel Barrett, 29, Merrick-square; Chas. T. Bell, Sheffield; John B. Bevan, St. Ives, Cornwall; Jas. Webb Booth, Huddersfield; J. R. Bosworth, Weymouth; G. W. Brumwell, Kendal, Westmoreland; W. C. Bucknill, Nuneaton, special Certificate of Honour; W. B. Burn, Fore-street, Limehouse; Louis C. A. Curré, Bath; W. R. Cheyne, 27, Nottingham-place; Eli Crew, Tetbury; James Cross, Prescot, Lancashire; Fred. Samuel Daldy, Broad-street Buildings; B. Gidley Derry, Plymouth; F. Edwards, Otton Belchamp; Percy M. Ellis, Botesdale; G. E. F. Etheredge, Starston, Norfolk; F. W. Fowke, Byfield, Northamptonshire; John Henry Gay, Wisbeach; Chas. Hedley, Richmond, Yorkshire; C. F. Hensman, Kimbolton; T. H. Hickman, Riseley, Bedfordshire; A. H. Higgins, St. John's, Southwark; F. Hopkins, Birmingham; Samuel Hosegood, Williton; W. W. Inglis, Commercial-road; Henry Mason Jay, Malmesbury; William George Kemp, Canterbury; William Lloyd, Carmarthen; William George Maddox, Euston-square; Walter Moore, Warwick; Shirley F. Murphy, Gower-street; Charles Ogden, Rochdale; William Hill Payne, Bristol; Isaac Pitt, Willenhall, Staffordshire; Charles Read, 1, Guildford-place; John James Ridge, Thomas-street, Southwark, special Certificate of Honour; F. W. Rogers, 71, Finchley-road, N.W.; C. H. A. Sampson, Stoney Stratford; Edward Sandwell, Gerrard-street, Soho; T. E. Scatchard, Boston Spa, Yorkshire; S. D. Shackelford, Husbands Bosworth; H. H. Slipper, 87, Leather-lane; Eldred N. Smith, Hertford; F. W. Strange, Liverpool; Lord Tattersall, Blackpool; Richard Tudge, Moreton, Hereford; H. J. K. Vines, Reading, special Certificate of Honour; Clarence Visick, 14, Regent's-park-road; Edward D. Wallis, Bodmin, Cornwall; J. Wallwork, Tyldesley, near Manchester; E. A. Waterworth, Newport, I. W.; W. E. Williams, Lanhilleth, Monmouthshire; G. A. Woods, Southport.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Barker, Walter, M.R.C.S. Eng., has been appointed Medical Officer to the Cheadle District of the Stockport Union.

Bent, John, M.R.C.S. Eng., Deputy-Inspector-General of Hospitals, has been appointed one of the Members of the Board of Medical Examiners at Jamaica, West Indies.

Bowerbank, Lewis Quier, M.D. Edin., has been appointed one of the Members of the Board of Medical Examiners at Jamaica, West Indies.

Constable, John, M.D. Univ. Glasg., has been appointed Public Vaccinator for the Parish of Leuchars, Fifeshire.

Cooper, Mr. Frank Wm., has been elected Assistant House-Surgeon to the Public Hospital and Dispensary, Sheffield.

Davies, John R., M.R.C.S. Eng., has been elected one of the Acting Surgeons to the Birmingham and Midland Free Hospital for Sick Children.

Dunn, Andrew, M.D. Edin., has been appointed one of the Members of the Board of Medical Examiners at Jamaica, West Indies.

Fiddes, Alexander, F.R.C.S. Edin., has been appointed one of the Members of the Board of Medical Examiners at Jamaica, West Indies.

Freeland, J. Ellis, M.D. Glasg., has been appointed Public Vaccinator for Port Glasgow.

Grime, Henry A., L.R.C.P. Edin., has been appointed Medical Officer of the New Workhouse of the Blackburn Union.

Hamilton, Robert, M.D. Cantab., has been appointed one of the Members of the Board of Medical Examiners at Jamaica, West Indies.

Ortiz, E. M., M.D., has been appointed a Resident Surgeon to the Birmingham Lying-in Hospital.

Osmond, T., M.R.C.S. Eng., has been appointed a Resident Surgeon to the Birmingham Lying-in Hospital.

Smith, T. S., M.B., has been appointed Junior House-Surgeon to the Manchester Royal Infirmary.

Teale, John W., M.A. Oxon., M.R.C.S. Eng., has been appointed House-Surgeon to the Bath United Hospital.

DEATHS.

King, H., M.D., late Surgeon 33rd Regiment, at Elderslie, Rathgar, Dublin, on September 19.

May, William, in practice prior to 1815, at 13, Great Trinity-lane, City, on September 23, aged 67.

Newby, Charles, M.R.C.S. Eng., at Cambridge, on September 6, aged 68.

Riordan, D. A., M.D., Assistant-Surgeon R.N., at Middleton, Yorkshire, on September 15.

Roberts, G., Surgeon R.N., at Howard-place, Edinburgh, on September 20.

Rush, William A., M.R.C.S. Eng., of Southminster, Essex, on September 20, aged 27.

Shaw, C., M.R.C.S. Eng., at Talbot-street, Dublin, on September 19.

Stephens, Edward, F.R.C.S. Eng., at Bridge-street, Manchester, on September 14, aged 67.

(a) I remember speaking of this case to Dr. Marshall Hall at the time, and alluding to the above-mentioned partial diminution of the lividity, when he observed that he thought he had witnessed "blushing" in certain cases confined to one side of the face.

THE FRENCH ACADEMY.—The death of Count Alfred de Vigny leaves a Chair vacant in the French Academy. This was the fourteenth Chair, and it was obtained by Vaugelas at its creation in the year 1634. In 1649 it was filled by Seudery, in 1668 by the Marquis of Dangeau, in 1720 by Marshal de Richelieu, in 1780 by Duke d'Harcourt, in 1803 by Lucien Bonaparte, in 1816 by Anger, in 1820 by Etienne, and in 1845 by Count Alfred de Vigny.

ILL-TREATMENT OF A LUNATIC.—On Saturday, Dr. Hardwicke held an inquest at the Great Northern Cemetery on the body of Henry Richardson, aged 29, who had died in the asylum at Colney-hatch. Alfred Lawrence Foster, the chief warder of the Clerkenwell House of Detention, said the deceased was imprisoned from April to September. He was often violent and excited, and frequently under punishment. He was placed on bread and water, the extreme time being forty-eight hours. He was treated as a rational prisoner up to within three weeks or a fortnight before leaving, as until then it was not thought he was insane. After hearing a great deal of Medical evidence, the jury found that the deceased died from disease of the brain, "accelerated by undue severity of punishment in the House of Detention."

OZONE.—A Mr. William C. Burder, in a letter to the *Times*, gives the results of eight years' observations with Schönbein's test-papers. He writes:—"The fact to which I wish to call particular attention is that the wind which has recently come over the sea invariably, or almost invariably, brings with it a large amount of ozone, while a land breeze usually yields but a small amount. A strong W.S.W. wind here is always charged with a large quantity of ozone, while other winds are generally but slightly charged with it, and such as have passed directly over the city of Bristol are altogether free from it. A recent visit to Sidmouth, on the south coast, has quite confirmed my previous notions in regard to sea breezes and ozone, and I may mention that a correspondent in New Zealand to whom I sent some test-papers assures me that he has obtained similar results in that island."

SANITARY REFORM IN THE EAST.—The town of Ismid (the ancient Nicomedia) is, from its position at the head of the gulf of that name, rather an important place. It has, however, for a long time been known and dreaded for the prevalence of intermittent and pernicious fevers. On an examination into the causes of the insalubrity of the place, it was found that, with the listlessness and apathy which distinguish Turkish populations, all the drains of the town had for years been completely choked up. Ahmet Effendi proceeded to cut a small canal from a neighbouring lake in the direction of the main drains. When it was nearly terminated, he gave notice to the Medjlis and the inhabitants that they must, within one week, clear all the drains to allow the water of the canal to pass through, failing which the town would most certainly be flooded. Their prayers and entreaties in favour of procrastination were unavailing. They set to work in good earnest as they were directed, and on the appointed day the waters rushed through these pestilential sinks to the sea, clearing everything away, and persons returning from Ismid assure me that the fever is disappearing altogether from the town.—*Times Correspondent, Constantinople.*

TREATMENT OF MALIGNANT PUSTULE.—*Galignani's Messenger* says that a French parish priest endeavoured to raise funds for the publication of a pamphlet in which an infallible remedy for carbuncle was to be revealed. This plan seems now to have been abandoned for the simpler one of publishing the remedy in one of the Medical journals; for we find in the *Union Médicale* an article by Dr. Topinard, in which he describes the *Dardelle* secret as follows:—"Prepare a round piece of linen of a sufficient size to cover the whole diseased part, and spread thereon a slight film of storax ointment, and then a layer of corrosive sublimate (bichloride of mercury) of the thickness of a two-franc piece. The plaster thus prepared is laid with the greatest care upon the part affected, and kept in its place with strips of sticking-plaster. After twenty-four hours this plaster may be removed, and it will then be infallibly found that the carbuncle or pustule has been destroyed. The place must now be dressed three times a-day with storax ointment spread upon linen; and at every dressing the part must be fomented with a mixture of the oils of linseed, lily, camomile, and hypericum. In the course of eight or ten days the eschar falls off, and the sore is treated like a common one." This remedy, discovered by a blacksmith of the name of Dardelle, has never been known to fail. Dr. Missa, from whom the prescription has been obtained, has used it these ten years with invariable success; and Dr. Topinard considers with reason that sublimate exercises a specific action in such cases. It is the more desirable that such a remedy should be widely circulated, since this very morning we find a new case of a man at Annouville-Vilmesnil, near Fécamp, who, having been stung on one of his fingers by a venomous fly, neglected applying proper remedies; and the consequence is that his finger has had to be amputated to prevent gangrene. He is now doing well.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. S. D. Hine.—The paper is in the printer's hands, and will shortly appear.

M. D.—Ask your own Medical attendant.

J. W. C.—The name and address are not in the Directory, nor in the Register of the General Medical Council.

Questioner.—Consult Dr. Mayo's papers, lately published in the *British Medical Journal*, and the writings of Dr. Hughes Bennett and of the late Dr. Todd.

Mr. Workman's (Royal London Ophthalmic Hospital) communication has been received; Mr. C. J. Evans' (Hull) communication has been received; Mr. Evershed's (Guy's) case has been received.

Great Western Cooking Depôt, 74, Jamaica-street, Glasgow.—We can speak with entire approbation of this excellent establishment and its branches. During a short visit to Glasgow we tasted the viands, and found them excellent, and can speak with equal confidence of the order, cleanliness, and civility which characterise the whole concern. We should like to see such establishments among the working men of London.

The Identification of the Reputed Nana.—The *Times of India* has a long article on the identity of the man who is in custody as the Nana. It states that neither the height nor complexion of the prisoner appears to correspond with those of Nana Sahib. At the same time the physical and psychical effects of six years of constant concealment, anxiety, travelling, and exposure to weather must be taken into consideration in judging of his appearance. It appears that there is direct Medical opinion against his identity. At the prisoner's first examination,—

> "Dr. Cheke and Dr. Jones assisted the magistrate. Dr. Cheke was formerly civil Surgeon of Cawnpore; Dr. Jones is so now. In his office as civil Surgeon, Dr. Choke attended professionally upon the Nana, but does not recognise the prisoner in any way. His person does not show the expected marks or traces said to have been left by Surgical treatment for certain minor diseases. In fact, Dr. Cheke is very strongly of opinion that the prisoner is not the Nana. A minute description of the prisoner's person has been drawn up by the magistrate with the assistance of the Medical Officer."

The article goes on to say that the prisoner refuses all solid food, and lives entirely on milk, which he only drinks night and morning. If the prisoner be the Nana, this may be one means he employs for altering his physique. Count Fosco's predilection for fruit tarts and cream was based on the necessity of maintaining his fat and his *incognito*.

A CORRECTION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—May I be allowed to correct an inaccuracy in my last letter. In speaking of the executions which had taken place here recently, I mentioned one man as having been hung for the murder of his wife, by stabbing her with a chisel. This was incorrect, inasmuch as that man was sentenced to penal servitude for life. The one who was hung for wife murder killed his victim by trampling upon her. I am, &c.

YOUR LIVERPOOL CORRESPONDENT.

PHYSICIANS AND DRUGGISTS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I think the Profession in Liverpool will be obliged to you for your insertion of the note headed "Is Old Parr Dead" in your last Number.

It is a gross evil that "Physicians" should aid tradesmen in their attempt to puff their wares, particularly when this puffing leads to a great deal of quacking on the part of parents, and may often prevent their sending for proper advice until it be too late. It is bad enough that there is already a system in this town by which unlicensed Practitioners are encouraged and assisted to practise. Several "Physicians" and others keep open house in a morning, and a large proportion of their gratuitous visitors bring notes from druggists who have already tried their 'prentice hand on these unfortunates, and who, from the stubbornness of the case, or from the looming necessity for a death certificate, think it well to get "a second opinion." I am, &c.

Liverpool, September 26. HENRY LOWNDES.

INFANTICIDE PREVENTION SOCIETY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It would probably be an ill omen if this much needed Society met with nothing but approval and laudation; it might become stunted in growth or perverted in purpose, and the great results hoped for by its promoters might not be realised. I cannot, however, think that any honest or intelligent journal would willingly misrepresent the scope or objects of such a Society as that which, under the most favourable auspices, is now being established, not for the purpose of "abolishing" infanticide (would to God that were possible!), but of preventing that monster crime as far as human agency can do so.

In your last week's journal "the enlightenment of the supporters of this embryo Society is hoped for," and you state that "the killing an infant is but the last link in a chain of error." The promoters join in this desire for enlightenment, and also agree as to the last murderous link in the chain of error; but, not satisfied with mere ethics, they are endeavouring to apply a practical remedy by which they hope to reduce the number of links in that blood-stained chain, and to improve our country's moral character in that respect.

Believing, moreover, with you, in the sad amount of unchastity in private society, we propose, in order to save infant life (while political economists are praiseworthily sowing the seeds of a better code of national and social morality), to remove some of the incentives to child murder, which we conceive will be best done by providing a home for the illegitimate and its mother, and by compelling the father to pay his quota not only towards his child's maintenance, but also the expenses attendant on its birth, and in certain cases for the woman's dishonour; and likewise to render him amenable to the criminal laws of his country if, through his neglect or connivance, the child should come to a premature or violent end. The Society does not expect to make either the man or woman mentally moral by these means (although salutary moral impressions on the latter are within the purpose of the Institution), but to inculcate the stern fact upon the individual and public mind that indulgence in immorality will be unerringly followed by responsibility and retribution.

It is not a "Foundling Hospital" that this Society proposes, but a thoroughly well-organised Institution for the reception of illegitimate children and their mothers, or the former alone, under well-advised rules and regulations.

I am, &c.

16, Craven-street, Strand, September 29. R. Dawson, Hon. Sec.

Cheap Microscopes.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Allow me to thank you for the very favourable opinion you have expressed with regard to the cheap object-glasses I have lately introduced for the use of students and working microscopists, but at the same time allow me to draw your attention to an equivocal expression that places me among the inferior ranks instead of the first—the position to which I aspire, and which the Jury Award of 1862 justifies me in claiming, three separate juries having given in an opinion as to the "excellence" of my manufactures. The paragraph I allude to is that at pages 279-80:—"And if he (the student) cannot afford to get one (microscope) by one of the best makers, we would recommend him to apply to Mr. Highley," etc. Moreover, the price given is for an instrument that I have long since given up and superseded; for, by a simple contrivance, I effect all that can be done by a magnetic stage, and which allows me to sell a microscope with all the motions you name, with one-inch and quarter-inch object-glasses, of the kind you speak so favourably of, for £5 5s., not £6 6s. as stated in the article of the 12th inst.; and this microscope I would back, as a scientific tool, against any other of the same price, whether the maker be "one of the best" or otherwise.

If you would kindly favour me with an examination of the mechanical parts of my cheap microscopes, together with my best or larger instruments, I am convinced you will find their performance, optically or mechanically, would justify you in ranking me in future with the best manufacturers.

I claim the honourable distinction of having introduced the first well-made cheap student's stand, viz., my "Hospital Microscope," of which Carpenter, Beale, Busk, Huxley, etc., have expressed favourable opinions, and which was the precursor of the "Educationals" of Smith and Beck, and other makers; and I have also now to claim being the first to introduce a really efficient cheap set of two-inch, one-inch, half-inch, and quarter-inch object-glasses, which are very superior to the foreign powers usually sold with "Students' Microscopes," and which I supply at a price that brings them within reach of any would-be microscopist, viz., £1 1s. and £1 11s. 6d.; and it is a fact that those jurors of Class 13 who examined these glasses expressed their opinion that they were "the best" of the cheap microscopic objectives in the whole Exhibition of 1862.

I am, &c.

18, Green-street, Leicester-square, Sept. 24. Samuel Highley.

COMMUNICATIONS have been received from—

Mr. Samuel Highley; Charing-cross Hospital; Mr. C. C. Atkinson; Mr. C. J. Evans; Questioner; Mr. S. D. Hine; Royal National Life-Boat Institution; Mr. H. Lowndes; Dr. J. W. Ogle; Mr. Christopher Heath; Mr. Sydney Jones; Dr. Moriarty; M.D.; Apothecaries' Hall; Dr. Charles Kidd; Dr. Devenish; Dr. Garrod; University of Durham; J. W. C.; Dr. Cockle; The British Meteorological Association.

BOOKS RECEIVED.

Report of the Main Drainage Committee on the Tenders for the Metropolitan Sewage. 1863.

⁎ Nine communications were received by the Board in answer to advertisements, six of which involved tenders. Dr. Thudichum estimates the urine of the metropolis at one million tons per annum, from which he proposes to make manure and purpurate of ammonia. The latter substance he values at £1000 per ton as a purple dye. A ton could be produced daily, yielding a return of £365,000 per annum.

On Peculiar Appearances exhibited by Blood Corpuscles under the Influence of Solutions of Magenta and Tannin. By William Roberts, M.D., Manchester.

⁎ From the effects produced on blood corpuscles by the substances named in the title, Dr. Roberts deduces certain principles concerning their homologies, and the fact that the envelope of the vertebrate blood disk is a duplicate membrane. He also recommends the former colouring matter in physiological research, on account of its inertness and solubility.

Small-pox and its Prevention. By William Newman, M.D. Stamford: Langley. 1863.

⁎ The writer recommends re-vaccination "as a matter of necessity" at from 12 to 15 years of age. He desires the Government to employ "coercive power to make vaccination and its repetition once at least a matter of positive certainty." He also holds that no false economy should be allowed to interfere with liberal payment of vaccinators.

Glasgow Medical Journal. October, 1863. Glasgow: W. Mackenzie.

⁎ Contains a good practical article on Expectorants by Dr. Easton; a continuation of Dr. Leishman's paper on the Mechanism of Parturition, and some useful papers by Drs M'Call Anderson, Doig, and Maclosky. The leading paper is one on the Army Medical Department, the gist of which is that the Army Medical service is good for a gentlemanly person in the infantry regiments, not paid enough in the cavalry, iniquitous in India. The Medical Profession is looking up, and if Government wants the best men, it must bid for them. The article is the converse of the well-known vaticination of Balaam; it tries to bless, but ends all the other way.

American Journal of the Medical Sciences. July, 1863. Philadelphia: Blanchard and Lea.

⁎ Some good reports on Military Surgery and Hospital gangrene are followed by reviews and bibliographical notices unusually copious. Altogether the volume is of great interest.

Madras Quarterly Journal of the Medical Sciences. October, 1862, and April, 1863. Madras: Gantz, Brothers.

⁎ An excellent Medical periodical, to which British and native Practitioners appear to contribute. The original essays are valuable, especially as illustrating points where Indian practice differs from English.

On the Use of the So-called Expectorants. By J. A. Easton, M.D. 1863.

A Southern Clergyman's Exposition of the Oath of Allegiance. London: H. F. Mackintosh.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 26, 1863.

BIRTHS.

Births of Boys, 948; Girls, 853; Total, 1801.
Average of 10 corresponding weeks, 1853-62, 1709 6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	618	615	1233
Average of the ten years 1853–62	631·3	580·7	1212 0
Average corrected to increased population..	..	..	1240
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	4	2	15	5	2	4	6
North ..	618,210	10	5	43	..	7	18	11
Central ..	378,058	2	1	13	2	5	8	4
East	571,158	4	3	40	2	10	18	5
South ..	773,175	9	3	37	3	8	15	20
Total.. ..	2,803,989	29	14	148	12	32	58	46

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·274 in.
Mean temperature	50·4°
Highest point of thermometer	63·2
Lowest point of thermometer	40·8
Mean dew-point temperature	44·4
General direction of wind	S.W.
Whole amount of rain in the week	0·97 in.

APPOINTMENTS FOR THE WEEK.

October 3. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

5. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

6. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

7. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m. Middlesex, 1 p.m.; London, 2 p.m.

Hunterian Society, 8 p.m. Mr. Hutchinson, "On the supposed Effect of Tobacco in producing Amaurosis."

Obstetrical Society of London, 8 p.m. Mr. Hardey (Hull), "On Retroflexion of the Uterus." Dr. Madge, "On Hydrocephalus." Dr. Pritchard (Glasgow), "On Abortion procured by Tents of Sea-Tangle."

8. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

9. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

◆

PROFESSOR HUXLEY'S LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

IV.—*The Skulls of Fishes.*

It has been seen that the skull of Man and that of the Pike agree in passing, in a similar order, through similar developmental stages. Each, at first, is a *membranous cranium*, its walls being composed of indifferent tissue, with the exception of that small part of its base which is occupied by the notochord. The greater part of the substance of each becomes chondrified, and thus that *cartilaginous cranium* is produced, which is a temporary structure in the Man, but a persistent one in the Fish. Neither in the membranous, nor in the cartilaginous state does the cranium of either Man or Fish present any trace of that segmentation which becomes obvious in the third condition, when, by the deposit of calcareous salts around certain centres, either in the cartilaginous cranium or the adjacent membrane, the *bony cranium* is developed.

These three conditions of the skull are manifested, in the same order of succession, by all vertebrate skulls which become completely ossified; but the crania of many vertebrated animals remain throughout life in the second state, or in a condition intermediate between that and the third, while the skull of one of the *Vertebrata* persists in a state which can only be regarded as a modification of the membranous cranium. Hence, I shall proceed to describe the leading modifications of the Vertebrate Skull under these heads:—A. The *membranous cranium.* B. The *cartilaginous cranium.* C. The *cartilaginous cranium, with superadded membrane bones, but no cartilage bones.* D. The *osseous cranium.*

The three first mentioned kinds of skull are met with only among fishes — *Amphibia*, *Reptilia*, *Aves*, and *Mammalia* invariably possessing a larger or smaller number of cranial bones developed in cartilage.

(A.) The only animal, at present known, which comes under this category is that singular fish, the lowest of all *Vertebrata*, *Amphioxus lanceolatus* (Fig. 27). The notochord (*ch.*), surrounded by a merely membranous sheath, extends very nearly to the anterior pointed extremity of the body. The myelon, or spinal chord (*My*), occupies the ordinary position above it, in a canal formed by upward processes of the membranous sheath, and gives off the spinal nerves, *d d*, on each side. Quadrate masses of somewhat denser tissue, *e e*, seem faintly to represent neural spines. Just above the anterior boundary of the mouth, but far behind the anterior end of the notochord, the myelon, dilating very slightly, suddenly terminates, and with it, the neural canal. The lateral muscles are divided into segments corresponding with the pairs of spinal nerves, and the most anterior of these segments is situated just behind the slightly dilated chamber of the neural canal, which contains the correspondingly enlarged end of the nervous axis. The latter is all that represents the brain, and the chamber is the skull.

Fig. 27.

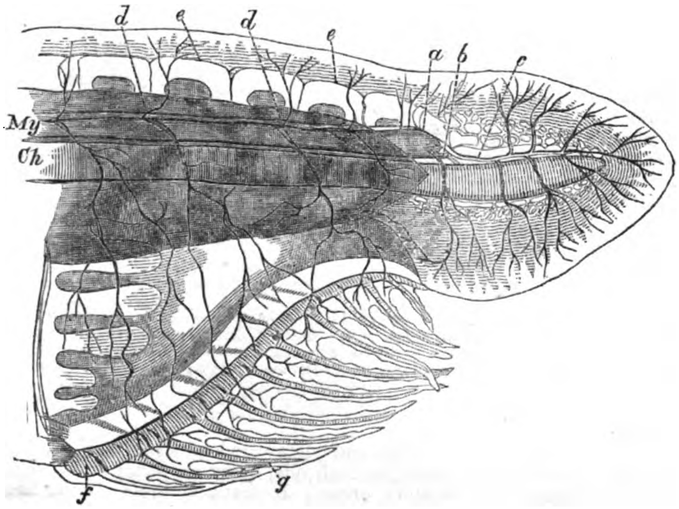


Fig. 27.—Skull of *Amphioxus Lanceolatus* (after Quatrefages). *a*, Position of olfactory (?) sac; *b*, optic nerves; *c*, fifth (?) pair; *d*, spinal nerves; *e*, representatives of neural spines; *f*, *g*, oral skeleton; *Ch*, notochord; *My*, spinal chord, or myelon.

A ciliated sac placed at (*b*), in connexion with the upper surface of the brain, has been considered to be the olfactory organ of this fish, but it is possible the sac may simply represent the pineal body; optic nerves (*b*) are given off to the rudimentary eyes, and the branches (*c*) appear to be analogous in function to the fifth pair. But no pituitary body has been recognised, and what is still more singular, there is no trace of auditory sacs. A cartilaginous ring, provided with tentacular prolongations (*f*, *g*), surrounds the mouth, and there is a singular branchial skeleton more like that of an Ascidian than any ordinary vertebrate structure; but neither of these structures probably have anything to do with the true cranial or facial skeleton.

It will be observed that this very remarkable skull, if it can be properly so-called, is not strictly comparable to an arrest of development of a higher vertebrate skull; the notochord extending far beyond the end of the cranium, which it never does in any embryonic condition of a higher vertebrate.

(B.) *The Cartilaginous Cranium.*

Of this there are three forms; in the first (*a*) there is no mandible; in the second (*b*) the mandible is present, and the suspensory apparatus by which it is connected with the skull forms one mass with the latter; in the third (*c*) the mandible is also present, but the suspensory apparatus by which it is connected with the skull is freely movable.

Fig. 28.

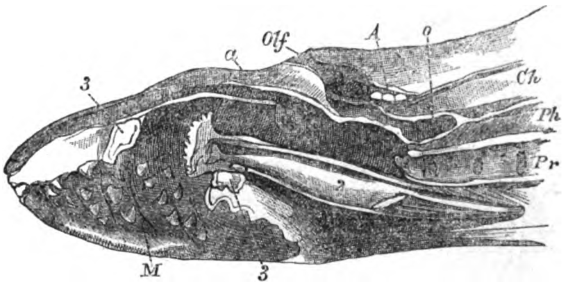


Fig. 28.—Vertical and longitudinal section of the anterior part of the body of a Lamprey (*Petromyzon marinus*). *A*, the cranium, with its contained brain; *a*, section of the edge of the cartilage marked *a* in Fig. 29; *Olf*, the entrance to the olfactory chamber, which is prolonged into the cæcal pouch, *o*; *Ph*, the pharynx; *Br*, the branchial channel, with the inner apertures of the branchial sacs; *M*, the cavity of the mouth, with its horny teeth; 2, the cartilage which supports the tongue; 3, the oral ring.

(B. *a.*) This kind of cartilaginous cranium is found only among the *Marsipobranchii*, or Lampreys and Hags, and a description of its character in the former will suffice to illustrate its nature. Fig. 28 represents a vertical and longitudinal section of the anterior part of the body of the large sea Lamprey (*Petromyzon marinus*), and gives a very good notion of the excessively minute proportions of the proper skull (A) to the rest of the body in this animal. A and B (Fig. 29) are lateral and superior views of the skull with its accessory cartilages, separated from the soft parts. The notochord (*Ch*) is, as in *Amphioxus*, exceedingly large, and is surrounded by a merely membranous sheath, from which prolongations are given off above to form the sides of the small neural canal. In the walls of this, cartilaginous rods, which represent neural arches, are developed, and in the head it dilates more distinctly than in *Amphioxus*, though the cranial cavity is still very minute. The Myelon also undergoes a very distinct enlargement as it enters the cavity, and all the typical divisions of the vertebrate Encephalon are recognisable in the brain thus formed.

The notochord terminates in a point immediately behind the pituitary body. As it approaches the cranium, a rod of cartilage (*l*, Fig. 29, A) is developed on each side in the lateral parts of its sheath, and gives attachment to the branchial skeleton (*m*); still more anteriorly two other cartilaginous filaments (*k*) appear, side by side, in the under region of the sheath. These pass into the hinder part of the proper cranium, which is a sort of cartilaginous box, closed in front, and through the greater part of its roof, only by membrane, but complete behind, where it arches over the myelon, and is perforated by the occipital foramen. The postero-lateral parts of this cranium are dilated to give rise to the two oval auditory capsules (*c*), and beneath these they are produced into two processes, (*h*) and (*f*), which have a common base, but diverge from one another below. The process (*h*) gives attachment to a cartilage which is connected with that supporting the tongue (*i*). The process (*f*), on the other hand, passing downwards and forwards, becomes continuous at (*g*), with another bar of cartilage (*e*), which is connected with the antero-lateral part of the skull beneath the olfactory capsule. The eye lies over the triangular space inclosed between the sides of the skull and these two processes, so that *e*, *g*, *f* may be termed the *subocular arch*.

FIG. 29.

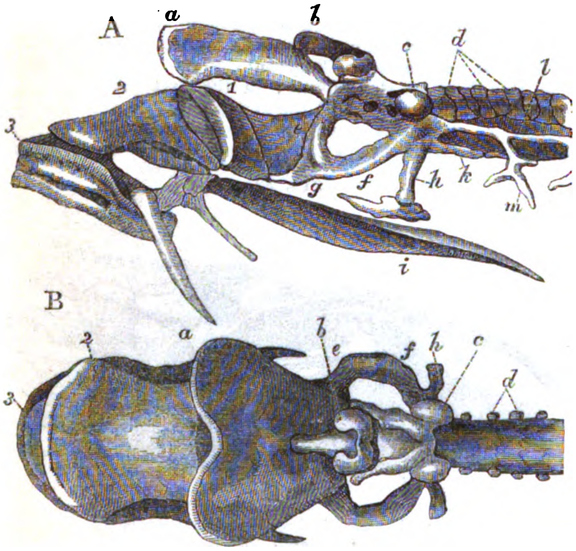


FIG. 29.—A, The skull of a Lamprey viewed from the side; B, from above, *a*, The vomerine plate; *b*, the olfactory capsule; *c*, the auditory capsule; *d*, the neural arches of the spinal column; *e*, the palato-pterygoid portion; *f*, the hyomandibular and symplectic portion, and *g*, the quadrate portion of the subocular arch; *h*, stylohyal process; *i*, lingual cartilage; *k*, inferior; *l*, lateral prolongation of the cranial cartilage; 1, 2, 3, accessory labial cartilages (after Müller).

If the skull is viewed from below, the processes (*e*) and (*e*) of opposite sides are seen to be continued into one another by a transverse band of cartilage, which forms the proper anterior boundary of the skull. The front edge of this band, which Müller calls the "hard palate," articulates with the broad and expanded cartilaginous plate (*a*). The common roots of the processes (*f*) and (*h*) are also continued into a "basi-occipital" plate of cartilage, but, between this plate and the hard palate, there is an oval space through which the neck of the long olfactory cæcum (*o*) (Fig. 28) passes. This cæcum, therefore, separates the front part of the floor of the cranial cavity, which is simply membranous, from the so-called "hard palate." On comparing this skull with that of the embryonic fish, (*h*) obviously answers to the stylohyal cartilage; (*f*) to the ascending posterior crus of the palato-quadrate inverted arch and the hyomandibular cartilage; (*e*) to the ascending and anterior crus of the same. It is true that no natural division of the arch into palato-quadrate and hyomandibular (and symplectic) portions occurs in the lamprey, but this is only one of several respects in which the Marsipobranchs resemble *Amphibia* rather than osseous fishes. The inverted cartilaginous arch which gives attachment to the hyoidean and mandibular apparatuses of a tadpole is strictly comparable to the arch (*e*, *g*, *f*) in the lamprey. The margins of the oval space upon the base of the skull answer to the divergent *trabeculæ cranii*, and the plate (*a*) to the ethmo-vomerine cartilage. The remarkable and apparently anomalous separation of the *basis cranii* into an upper membranous and a lower cartilaginous part by the interposition of the prolongation backwards of the olfactory chamber, seems to me to be comparable to that separation of the upper and lower walls of the presphenoid, basi-sphenoid, and even of the basi-occipital, by a backward extension of the olfactory cavities, which takes place in so many of the *Mammalia*. On the other hand, I doubt whether the accessory buccal cartilages, 1, 2, 3, etc., can be strictly compared with anything in other fishes, though some of them are doubtless, as Müller has suggested, the analogues of labial cartilages.

(B.*b*.) *The cartilaginous cranium with a mandible and a fixed suspensorium.*

The *Holocephali*, or Chimæroid fishes (*Chimæra* and *Callorhynchus*) present this type of cranial organisation. In accordance with the large development of the brain, the skull, in these fishes, has attained a great advance in dimensions over the spinal column, and presents a large internal chamber. It is a continuous cartilaginous mass, without any superior aperture of sufficient size to deserve the name of a fontanelle, in the base of which the notochord does not persist, and which is definitely articulated by two lateral convex facets and a median concave surface on the hinder margin of its floor (*A*, Fig. 31) with the anterior segment of the spinal column.

FIG. 30.

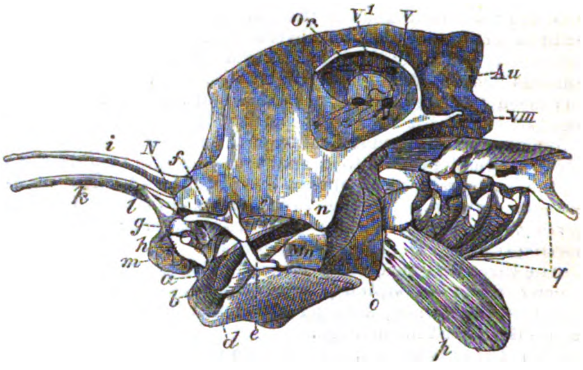


FIG. 30.—Skull of *Callorhynchus Antarticus*, after Müller. *a*, anterior tooth of the upper jaw; *c*, posterior tooth; *b*, mandibular tooth; *d*, *e*, *f*, *g*, *h*, *i*, *k*, *l*, *m*, accessory labial, nasal, and rostral cartilages; *n*, quadrate portion of the subocular plate which supports the hyoid *o* and the mandible *Mn*; *p*, the representatives of branchiostegal rays; *q*, the branchial arches; *Au*, auditory region; *Or*., orbit; V^1, nasal division of the fifth nerve.

FIG. 31.

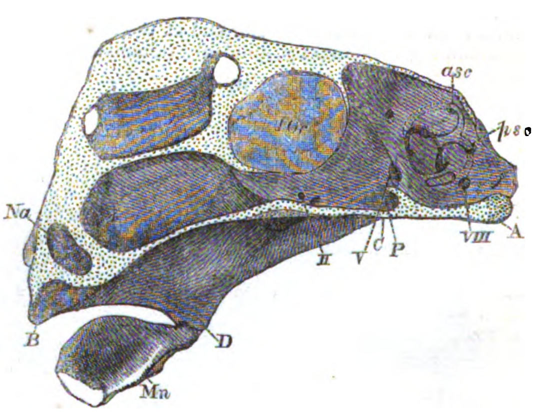


FIG. 31.—Vertical section of the skull of *Chimæra monstrosa* without the labial and nasal cartilages. *A*, the basi-occipital region; *P*, the pituitary fossa; *Na*, the partition between the two olfactory sacs; *B*, the alveolus for the anterior upper jaw tooth; *I. Or*., the interorbital septum; *asc*, *psc*, anterior and posterior vertical semicircular canals; *I*., *II*., *V*., *VIII*., exits of the olfactory optic, fifth, and eighth pairs of cerebral nerves.

The skull is high and compressed from side to side; posteriorly, it exhibits, on each side, an enlargement (*Au*), which lodges the auditory organ. In front of these are the large orbits (*Or*.), separated by a thin membranous interorbital septum (*I. Or*.), which is unlike the interorbital septum usually met with, in that it lies above, and not below, the forward continuation of the cranial cavity. Usually, an interorbital septum is formed by the compressed floor of the skull; here it is constituted by the compressed roof. Two chambers for the olfactory sacs (*N*, *Na*) terminate the skull anteriorly and inferiorly, and they, the lips and the anterior part of the snout, are protected and supported by a number of accessory cartilages (*d* to *m*).

Below the auditory and orbital region, and in front of the latter as far as the nasal capsules, the base of the skull gives off a broad cartilaginous subocular plate (*C*, *D*, Fig. 31), the two edges of which, sloping towards one another, bring it to a point at *n*, (Fig. 30, *D*, Fig. 31). With this part of the plate the mandible (*Mn*) is articulated, while to the middle of its posterior margin (*D*, *C*) the hyoidean apparatus (*O*) is attached.

A vertical section of the skull (Fig. 31) shows that the proper cranial cavity consists of a large posterior chamber, divided by a long and comparatively narrow neck from a much smaller, but still large, anterior chamber. The latter contains the olfactory lobes, and presents on each side, in front, a sort of cribriform plate, through which the filaments of the olfactory nerve pass to the nasal sacs. The commencement of the narrow neck is perforated on each side by the optic foramina (*II.*). The hinder dilatation contains the mass of the brain, and presents on each side chambers for the auditory organs, which communicate with it. The posterior edge of the interorbital septum bounds this chamber in front, above the "neck." In front of the anterior boundary of the interorbital septum, and above the olfactory division of the skull cavity, there is a curious chamber filled with fatty matter, and open in front and behind, which is traversed by the nasal division of the fifth nerve.

Müller well says "the skull of *Chimæra* is most like that of a tadpole;" (a) but if we interpret the former strictly by the latter, as I believe ought to be done, the results will be somewhat different from those at which Müller arrives. The plate *C D* answers precisely to the subocular arch of the lamprey and to the corresponding arch in the tadpole's skull, though it is chondrified throughout, and not perforated by a large aperture, as in the two latter animals. But in this case the further development of the frog proves that the subocular arch answers to the common suspensorium of the hyoid and mandible, and to the palatine, pterygoid, and quadrate bones; and that it has nothing to do with the maxilla or premaxilla. The large posterior upper jaw teeth of the Chimæroids (*c*), therefore, being attached to the under surface of the anterior part of the subocular plate, must be palatine or palato-pterygoid teeth. The small anterior teeth (*a*), on the other hand, are fitted into fossæ, or alveoli, *B*, which are situated immediately under the floor of the nasal chambers, in the vomerine region of the skull, and must be regarded as vomerine teeth—as, indeed, Cuvier suggested. On the other hand, I think Müller's view that the cartilages (*d*, *e*, etc.,) are accessory labial cartilages, and not, as Cuvier supposed, representatives of premaxillæ, maxillæ, etc., has everything in its favour.

(B. *c.*) *The cartilaginous cranium, with a mandible and with a movable suspensorium.*

This form of cranium is met with in the sharks and rays, and may be illustrated by an account of that of *Squatina*, the monk fish. (Figs. 32 and 33.) The form of the skull is here the exact converse of that observed in the Chimæroids, being exceedingly broad and depressed, instead of high and compressed. The surface of the cranium is encrusted with a pavement of minute ossicles, arising from the ossification of the superficial layer of the cartilage. Behind, the basilar region of the skull presents two lateral articular surfaces to the front part of the spinal column, and exhibits the wide lateral expansions for the auditory organs (*Au*); at the sides of the skull in front of these lie the orbits (*Or*) bounded behind by the postorbital processes (*c*), and by the antorbital, or prefrontal, processes (*b*) anteriorly. The latter divide the orbits from the nasal chambers (*N*), the apertures of which look downwards. The prefrontal processes are continued, on the inner sides of the nasal chambers, into a broad plate, emarginate anteriorly, which terminates the floor of the skull, and corresponds with the ethmovomerine part of the cartilaginous skull of the human fœtus or of the pike. The anterior part of the roof of the skull is not directly continued into the upper surface of the plate, but ends in a deeply concave edge; the vacuity, or fontanelle, is occupied by fibrous tissue in the recent state. Small apertures upon the roof of the occipital region communicate with the auditory chambers. The upper end of a stout prismatic cartilage (*g*) is movably articulated with the outer wall of the auditory prominence. The lower end of this cartilage is united by ligaments behind to the hyoidean arch (*Hy*), and in front to the upper and lower dentigerous arches (*h* and *Mn*). Each of these arches is composed of two pieces united in a median symphysis, and the under surfaces of the outer and posterior ends of the upper arch are articulated with the upper surfaces of the outer and posterior ends of the lower arch. The upper arch is in addition articulated with the under surface of the prefrontal region of the skull. Three cartilages (*i*, *k*, *l*), connected together by ligaments, lie outside the dentigerous arches, two, on each side, being superior and one inferior. Furthermore, cartilaginous filaments (*Op*) are attached to the hinder edge of the prismatic cartilage (*d*), and to the hyoidean arch (*Br*).

Fig. 32.

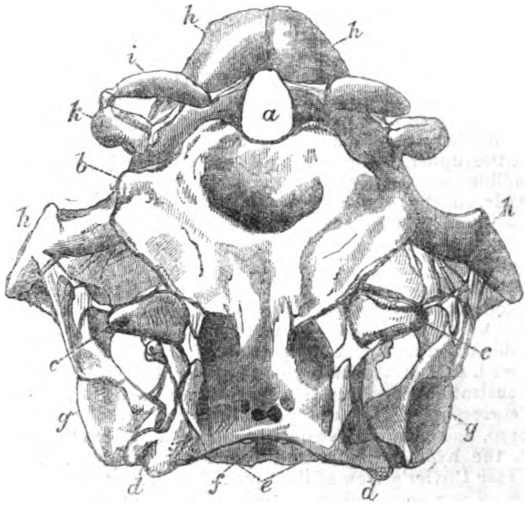
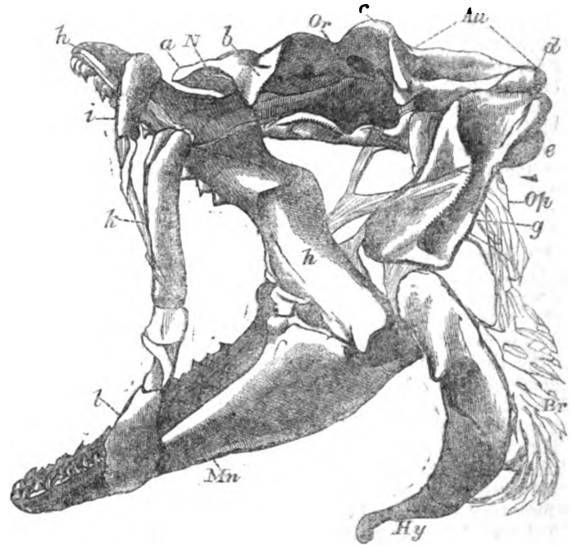


Fig. 33.



Figs. 32 and 33.—The skull of *Squatina* viewed from above (Fig. 32), and from the side (Fig. 33). *a*, vomerine region; *b*, prefrontal; *c*, post-orbital; *d*, post-auditory processes; *e*, occipital condyles; *f*, occipital foramen; *g*, suspensorium; *h*, upper dentigerous arch; *i*, *k*, *l*, labial cartilage; *Mn*, mandible; *Au*, auditory chamber; *Or*, orbit; *N*, nasal chamber; *Op*, opercular cartilaginous filaments; *Br*, branchiostegal rays; *Hy*, hyoidean arch.

The interpretation of the cartilages (*i*, *k*, *l*) has been a matter of much controversy. In a remarkable essay published in the first volume of the *Mémoires du Museum*, Cuvier proposed to consider the upper dentigerous arch (*h*) as the homologue of the palatine and pterygoid bones of osseous fishes, the cartilages (*i*, *k*) as the premaxilla and maxilla. The suspensorium (*g*) he considered to be the homologue of the hyomandibular, symplectic, and metapterygoid. The lower dentigerous arch *Mn* was obviously the mandible.

(a) "Vergleichende Anatomie der Myxinoiden." Erster Theil, p. 159.

On this latter point all anatomists are agreed; but, in his famous "Comparative Anatomy of the Myxinoid Fishes," Johannes Müller, guided like Cuvier by purely anatomical considerations, and by what I have elsewhere termed the method of gradation, proposed a totally different interpretation of the other parts. According to this view, (*i*, *k*) and (*l*) are merely labial cartilages, and therefore do not represent the premaxilla and maxilla. Again, Cuvier had greatly relied upon the absence of any parts on the inner side of (*h*) which could answer to palatine or pterygoid elements, in arguing that (*h*) itself represents them. But Müller adduced his own and Henle's observations to prove that in a great many Plagiostomes, particularly the Rays, such cartilages situated on the inner side of the upper dentigerous arch do occur, and thus arrived by a line of argumentation precisely as legitimate as that of Cuvier at the exactly opposite result,—that (*h*) is the premaxilla and maxilla, and not the palatine or pterygoid.

The fact that these opposing views were entertained by men like Cuvier and Müller is evidence that each had much in its favour; but, in fact, neither was free from grave difficulties. Thus neither accounted for the articulation of the mandible with the upper dentigerous arch,—a relation into which the mandible never enters either with the palatine, or with the maxilla, in the vertebrate series; and as Müller himself is forced to admit that some of the cartilages on the inner side of the upper dentigerous arch are accessory, why should not all be so?

This is just one of those cases in which the study of development manifests its full importance, and decides at once problems which, without it, might be the subjects of interminable discussion. A comparison of the skull of the monk fish with that of the embryonic osseous fish seems to me to demonstrate beyond question that the upper dentigerous arch (*h*) corresponds with the palato-quadrate cartilage of the embryo, and that the suspensorium (*g*) equally corresponds with the hyomandibular and symplectic cartilage. But in this case Cuvier's view of the upper dentigerous arch must be regarded as a singularly near approximation to the truth, for it certainly answers to the palatine and pterygoid; though, in addition, it contains the representatives of the quadrate and meta-pterygoid bones of the osseous fish. And his opinion as to the nature of the suspensorium was still nearer to what I believe to be right. On the other hand, I think it very probable, though not certain, that, as Müller supposed, the cartilages (*i*, *k*, *l*) are merely labial, and that these fishes have no representatives of the premaxilla and maxilla. But the so-called palatine and pterygoid cartilages of Müller, if the view I take is correct, are as much accessory parts as the spiracular cartilages, and, like them, have no representatives in osseous fishes.

EXOPHTHALMOS FROM ABSCESS.—Professor Arlt related an interesting case to the Vienna Medical Society. A child, 15 days old, was brought to his Dispensary, who, otherwise quite well, presented a remarkably large exophthalmos. The eye was forced out about half an inch forwards, and nearly to the same extent outwards, the lids being distended and œdematous, and the conjunctiva, cornea, and iris remaining in a normal condition. The exophthalmos first commenced appearing on the tenth day after birth, and within five days had reached this enormous size. Dr. Arlt, believing that no other diseased process would explain this rapid protrusion, considered that abscess must be its cause, and made an exploratory puncture beneath the internal rectus. A little blood was the sole result; but next day the child's condition getting worse, and a large prominence appearing at the inner angle, an incision half an inch deep was made by a small bistoury between the ball of the eye and the lower eyelid, with the effect of discharging a spoonful of thick pus, and allowing the eyeball to be replaced. Dr. Arlt believed the abscess proceeded from the ethmoid bone. Neither he or Professor Pitha had ever met with exophthalmos from abscess in a child, although familiar with this case in the adult.—*Wien Wochenblatt*, 1862, No. 18.

CHEMICAL AIDS TO THE MEDICAL PRACTITIONER.

By ROBERT DUNDAS THOMSON, M.D., F.R.S.S. L. & E., etc.

No. II.

Mode of Estimating the Nutritive Value of Bread—Estimation of the Water in Bread—Different in the Crumb and Crust—Analysis for the Nitrogenous Constituents in Bread—Combustion with Soda-Lime — Preparation of Soda-Lime — Preparation of Standard Solution of Oxalic Acid—Convenient Division of the Gallon.

How are we to estimate the nutritive value of bread and flour? is a question which one would imagine was thoroughly understood, if we were to judge by the numerous facile testimonials which are too often published by interested tradesmen from so-called scientific authorities. Chemical physiology must inform us that the destination of bread when used as food is to make healthy blood. Bread, and the blood formed from it, contain nitrogenous, non-nitrogenous proximate ingredients, and certain salts. These, our present knowledge instructs us, are not formed in the human system; but as they exist in the vegetable world, so are they taken up by animals, sanguified, and deposited to form solid tissue.

The previous question can therefore only be conscientiously answered by the chemical determination of the amount of (1) nitrogenous or muscle-forming ingredients in the bread, (2) of the non-nitrogenous or special heat-forming principles, and (3) of the saline constituents. The experiments required to solve these points (which will occupy some days) being made, we then proceed to determine the relations which exist between these three divisions, and to compare the results with some standard. Then alone is any one entitled to pronounce judgment on the nutritive value of flour or other farinaceous article of food. It will be obvious, from what has been said, that as the object of using bread for food is to produce good blood, a knowledge of the constitution of healthy blood must precede our conclusions as to the adaptation of the bread to fulfil its desired functions. Competency, therefore, to deal with such questions presupposes thorough medical and physiological knowledge.

The first experiment in the analysis of bread, as of other articles of nutriment, is the determination of the amount of water of hydration contained in the loaf. And there can be little doubt that the state of the hydration of starch, as an article of food, is of greater importance than is usually thought. It is, in fact, the difference between good and badly cooked farinaceous matter entering into our nutriment. The water is estimated by cutting a slice across the loaf, including the crust. It should weigh from 1000 to 3000 grains. It may be weighed out either in a porcelain or platinum capsule, and should then be placed in an oil or air-bath heated up to 260° to 340° of Fahrenheit, according as the result is desired to be slow or rapid. The most rapid drying will of course be obtained at the higher temperature, but care must be taken that the heat does not exceed 350°, otherwise the bread may be charred. The temperature of 212° is found by experience to be too low for the complete dehydration of nitrogenous substances, and hence these bodies are usually subjected by analysts to an air temperature of 350° F. previous to their being employed in organic analysis. The details of the experiment for the determination of the water of hydration of bread may be illustrated by an example.

White Fermented Bread.

Weight of capsule and bread in grains . .	1719·	
Weight of capsule	719·	1000
Weight of capsule and bread after 4 hrs. at 212°	1436·	283·
Weight of capsule and bread after 6 additional hours at 212°	1399	312·7
Weight of capsule and bread after 2 additional hours at 212°	1371·4	347·6
Weight of capsule and bread after 2 additional hours at 340°	1369·4	349·6
Weight of capsule and bread after 1 additional hour at 340°	1357·6	361·4
Weight of capsule and bread after 2 additional hours at 340°	1357·4	361·6

Aërated Bread.

Weight of capsule and bread in grains .	2071·30	
Weight of capsule	1071·30	1000
„ „ at 212° 4 hrs. . .	1740·30	331·
„ „ „ 6 „ additional.	1723·70	347·60
„ „ „ 2 „ „ .	1712·20	359·10
„ „ 340° 2 „ „ .	1707·40	363·90
„ „ „ 1 „ „ .	1696·90	374·40
„ „ „ 2 „ „ .	1696·60	374·70

The white fermented bread lost 36·16 per cent. of water, and the aërated bread 37·47 per cent.

It might be supposed that the high temperature in which a loaf is placed in a baker's oven (448° to 572° F.) should dispense with the necessity of any such process of drying as a preparation for chemical analysis. But when we introduce the bulb of a thermometer into the interior of a loaf we find that the instrument never rises as high as 212°, but remains about 207°. Now, at a temperature between 212° and 284° starch retains its atom of constitutional water, and forms a hygroscopic mobile powder corresponding with the formula $HO,C_{12}H_9O_9$. When starch dried at this temperature is exposed to the air, it absorbs two atoms of water, and becomes $HO,C_{12}H_9O_9, 2HO$. In very moist air it takes up ten atoms of water with the formula $HO,C_{12}H_9O_9, 10HO$; and in an atmosphere thoroughly saturated with moisture fifteen atoms of water are absorbed, giving the starch, then having the formula $HO,C_{12}H_9O_9,15HO$. In the last condition starch is composed of 54·55 starch, and 45·45 water. The following table expresses these and other states of starch:—

		Starch per cent.
1. Anhydrous starch as united with oxide of lead . .	$C_{12}H_9O_9$	
2. Starch dried between 212° and 284°	$HO,C_{12}H_9O_9$	100
3. Starch dried at 68° in a vacuum	$HO,C_{12}H_9O_92HO$	90
4. Starch dried at 68° in air .	$HO,C_{12}H_9O_94HO$	81·82
5. „ „ in very moist air	$HO,C_{12}H_9O_910HO$	64·39
6. „ „ in air thoroughly saturated with moisture .	$HO,C_{12}H_9O_915HO$	54·55

If, therefore, a loaf is exposed to a moist atmosphere, we might expect it to absorb rather than to lose water. Certain it is that a loaf does not appear by careful experiments to lose much by drying at the usual temperature of the atmosphere after being removed from the oven. It will be found that 100 pounds of bread will, after being kept for a week, lose less than two pounds of its weight. The staleness of bread is not attributable to loss of water, since a loaf will be found to assume the inelastic aspect of the stale crumb without losing more than the two-thousandth part of its original weight. Staleness seems to be more due to a peculiar condition of the molecules from the operation of the heat, as everyone is aware that stale bread can be made to assume a considerable amount of freshness by moistening it with milk and reintroducing it into the oven, or exposing it to a temperature, under boiling, in an atmosphere saturated with moisture.

Different parts of the loaf, in consequence of their being exposed to various temperatures, contain unequal quantities of water. Thus the crust will be found to lose from 14 to 24 per cent. by drying—according as the loaf is less or more a crusty one—while the total loss of the loaf by exposure to the temperature of 340° will vary from 34 to nearly 40 per cent. The crumb, when the water contained in it is determined free from crust, will be found to lose from 40 to 47 per cent. of its weight. When we find that a loaf consisting of a due proportion of crust loses more than 50 per cent. of its weight by drying, the inference is that it contains more than its proper proportion of water, and the cause is then to be sought for. This may be ascribed to different sources—the inferiority of the flour, the addition of some farinaceous or other matter which has a tendency to retain moisture and prevent it from being expelled by the heat of the oven, or, being hygroscopic, to give rise to the absorption of moisture from the atmosphere. To determine accurately the amount of water in a loaf it might appear the best method of obtaining a correct mean result to employ in our experiment an entire loaf; for conducting an experiment on such a large scale peculiar apparatus would, however, be required, and probably a longer period would elapse before a result was obtained. It has therefore been found more convenient, and scarcely less accurate, to proceed in chemical analysis upon a more contracted scale. But in this case it must be remembered that the most rigid accuracy is required, and the most delicate and well-adjusted balance employed.

Determination of the Amount of the Nitrogenous Constituents of Bread.—Before proceeding to the combustion required to solve this problem, it is absolutely necessary to demonstrate that no ammoniacal salt has been mixed with the flour or dough, since in many kinds of bread the addition of ammoniacal salts is not uncommon. A qualitative analysis may be probably all that is required. For this purpose 300 grains of bread may be introduced into a retort or into a wine or Florence flask, to which a rectangular tube and perforated cork is adjusted. Mix the bread with a pint of boiling water into a pulp, and add to the mixture two drachms of strong caustic soda or potash; introduce into the horizontal portion of the rectangular tube a piece of turmeric paper, and at a little distance a slip of reddened litmus paper. Apply the heat of a gas or spirit lamp to the flask containing the bread and soda, when, if any ammonia be present, the turmeric paper will speedily be changed to a brown tint, and the reddened litmus will resume its original blue colour. Should the reaction be in favour of the view that ammonia is present in the bread, the contents of the flask should be boiled for a quarter of an hour, and the distillate condensed in a receiver, when, if the action of the distillate is strongly ammoniacal, its amount may be determined by a solution of acid of known strength, and the amount of ammonia therein calculated. It is obvious that an ammoniacal salt may be readily added to inferior flour, which would appear by analysis to be highly nitrogenous, although it might not be a nutritive sample of bread.

The question being decided, let us suppose in the negative, as to the presence of ammonia, we next proceed to determine the amount of nitrogen present in the proximate principles of the bread (fibrin, albumen, casein, and glutin.) A portion of bread is dried at a temperature of 340°; ten grains of this bread when it has ceased to lose weight are pulverised, and weighed out in a small tube or watch-glass with great care; the experiment being thus stated in the note-book:—

Weight of tube and bread . . .	30·54	
Weight of tube	20·54	
Weight of bread		10

The theory of the next portion of the experiment is to convert the nitrogen of the nitrogenous or nutritive principles of the bread into ammonia, the amount of which is to be determined and the nitrogen estimated from which it has resulted. This mode of procedure depends on a fact first discovered by Gay-Lussac (*Ann. de Chim.* viii., 440, 1818; *Ib.* xli., 398, 1829) that potash when calcined with an animal substance and lime, gives rise to the extrication of ammonia. The explanation is that the nitrogen of the substance and hydrogen of the water produce ammonia, or the hydrogen is supplied by the organic body, while the oxygen of the water and organic substance yield carbonic acid or carbonic oxide with the carbon of the body. The decomposition of the water and the union of the nitrogen and hydrogen would be expressed by the following formula:—C_3HNO_3 = the nitrogenous substance + $3NaOHO = 3(NaOCO_2)NH_3 + H$. This scheme merely expresses, however, a partial direction of the elements, as carburetted hydrogen and carbonic oxide, etc., are usually likewise produced. But it may suffice to indicate the nature of the decomposition.

This experiment was first practically applied to the determination of nitrogen in bodies by Professor Schafhaeutl, by heating the substance with a mixture of caustic potash and caustic baryta (*Phil. Mag.*, N. S., 16, 44, 1840) in his determination of the nitrogen in cast iron. This theory is now carried into practice by means of a mixture of caustic soda and quicklime.

Preparation of Soda-Lime Mixture.—A quantity of solution of caustic soda is evaporated to dryness in a silver basin or iron pot. A portion of the residue is then mixed in a mortar with quicklime, in the proportion of two quicklime and one solid caustic soda. When well triturated and thoroughly mixed, it is to be preserved in a well-stoppered bottle, to exclude the absorption of carbonic acid. A combustion-tube is next to be prepared, by taking a Bohemian glass tube of about fifteen inches in length, and drawing out one extremity to an angle, with a capillary closed point, as may be seen in any work on organic chemistry, or my "School Chemistry," p. 183. The open end is to be filed even and circular, and then the edges are to be slightly fused before the blowpipe, so as to give them an even surface. The tube is then to be filled to within three inches of its open mouth with a portion of the soda-lime mixture, which is effected by plunging the tube mouth into the soda-lime, and gradually jerking the mixture into the tube. The mixture is then poured into a porcelain mortar, leaving about one inch of mixture at the closed end. The contents of the weighed tube containing the ten grains of bread to be analysed are then transferred to the mixture, and the empty tube again weighed. The soda-lime and bread are then thoroughly triturated with a pestle till the bread is completely incorporated with the mixture. The mixture is then transferred to the tube by the same process of immersing the tube mouth in the mixture and jerking as in filling the tube with the soda-lime. A two-bulbed glass apparatus, containing from one ounce to two ounces of pure chlorhydric acid (proved to be free from ammonia) is then adjusted to the combustion-tube by means of a good cork. Care should be previously taken that a passage is left for the gases above the mixture in the combustion-tube, by placing the charged tube horizontally on the table, and gently tapping it, so as to cause the mixture to subside and leave a clear passage for the gases between the upper surface of the mixture and the glass tube. The tube is now placed in a combustion-furnace either heated by charcoal or by gas, the heat being gradually applied from the cork towards the closed end by means of a fender, which screens the upper part of the tube from the too rapid influence of the heat. As soon as the gases have ceased to be evolved, the closed point of the tube is to be broken off, and a current of air drawn through the apparatus by applying a sucking-tube to the open end of the bulbed apparatus. By this process, any ammonia which might have remained in the atmosphere of the apparatus is drawn through the chlorhydric acid, condensed, and retained as chloride of ammonium. The acid is transferred from the bulbed tube to a small porcelain basin, mixed with bichloride of platinum, and evaporated to dryness by a steam heat. The residue is washed out into a carefully weighed small filter, with a mixture of two measures of alcohol and one of ether. The filter is washed till alcohol and ether alone pass through the filter. The filter is then placed in a water-bath, and dried till it ceases to lose weight. The composition of the yellow salt, platino-sal-ammoniac, upon the filter is as follows:—

$$\begin{array}{ll} \text{Bichloride of platinum, PtCl}_2 . \;\; . & \left\{\begin{array}{l}\text{Pt} = 98{\cdot}7\\ \text{Cl}_2 = 71{\cdot}0\end{array}\right. \\ \text{Chloride of ammonium, NH}_4\text{ Cl} . & \left\{\begin{array}{l}\text{N} = 14{\cdot}\\ \text{H}_4 = \;\;4\\ \text{Cl} = 35{\cdot}5\end{array}\right. \\ & \quad\;\; \overline{223{\cdot}2} \end{array}$$

In 223·2 grains of this salt are contained 17 grains of ammonia and 14 grains of nitrogen. By simple proportion, then, we find the amount of nitrogen contained in the 10 grains of bread analysed, and by multiplying by 10 we procure the percentage. To have a check upon this determination we next proceed to ignite the salt, and filter in a platinum crucible, covering the crucible in the first instance with its lid, and applying the heat with moderation. The effect of the heat is to volatilise the sal-ammoniac (chloride of ammonium) and leave nothing save the metallic spongy platinum. Every 98·7 grains of spongy platinum remaining represent 223·2 grs. of the yellow platino-sal-ammoniac salt, or 14 grs. of nitrogen in the sample of bread. Sal-ammoniac is so volatile a salt that it is apt to communicate the motion of its own particles to those with which it may be in contact, and hence care must be taken that none of the finely-divided platinum be carried along with it. Another and more rapid method of determining the amount of ammonia distilled is to cause the products of combustion to pass into an acid solution of known strength, and then to ascertain by means of an alkaline liquor also carefully prepared the amount of acid unsaturated. Any of the mineral acids may be employed for the standard; but for upwards of twenty years I have been in the habit of using oxalic acid, and have found it very convenient, I would therefore recommend its use to the attention of Medical Practitioners.

To Make a Standard Solution of Oxalic Acid it is necessary either to dissolve, filter, and crystallise it anew after purchase, or to obtain it from a manufacturing chemist who professes to deal in pure chemical substances, and who will not object to demonstrate its purity before purchase. When dissolved in distilled water there should be no milkiness in the fluid (absence of oxalate of lime).

To make a good useful standard solution of this and of other bodies for analysis by volume (volumetric analysis), the system introduced by Mr. Griffin of adapting the volumes to our imperial measures will be found most applicable. I do not wish it to be understood that I object to the introduction of French measures. On the contrary, I think it would be highly advantageous, but in practical applications in this country at present, where every weight and measure must be referred to our own standards before they can be understood, the use of volumes applicable to the gallon saves much risk of error. The division of the gallon of distilled water is as follows, according to Mr. Griffin:—

1	septem.	7 grs.	water				
100	,,	700	,,	$\frac{1}{10}$ lb.	water	$\frac{1}{100}$	gallon.
1,000	,,	7,000	,,	1 lb.	,,	$\frac{1}{10}$	,,
10,000	,,	70,000	,,	10 lb.	,,	1	,,

It will be found advantageous to employ 1000 septems as our standard, and to make our various solutions so as to dissolve one atom or equivalent of the acid, alkali, or salt in this amount of distilled water. The atomic weight of oxalic acid ($HO,C_2O_3 2HO$) is 63·. When we place the weight of menstruum and acid in parallel lines

1000· septems water
63· grains oxalic acid

we at once see that 1000 of the solution will contain 63 grs. of acid, 100 of the solution 6·3 grains, and 10 of the solution ·63 grains oxalic acid. If it is desired to make a half gallon solution, 35,000 septems of distilled water are to be measured out by means of a proper measure, and 2205 grains of oxalic acid dissolved in it. For a gallon solution 70,000 septems of distilled water are measured out, and 4410 grains of oxalic acid dissolved in it. These may be preserved in Winchester quart well stoppered bottles. It will be necessary to check the accuracy of this standard solution by means of a prepared solution of alkali which will be subsequently described.

ORIGINAL COMMUNICATIONS.

A CASE OF

BONY ANCHYLOSIS AT THE KNEE FOLLOWING A GUN-SHOT WOUND,

TREATED BY EXCISION OF THE ANCHYLOSED PORTIONS.

By HENRY SMITH, F.R.C.S.
Assistant-Surgeon to King's College Hospital.

John H., aged 29, a tall man of large frame was admitted into King's College Hospital, August 28, under the care of Mr. Henry Smith. The patient was a private in the Fusilier Guards, and was shot through the left knee-joint at the battle of Inkermann. The ball lodged in the popliteal space, and from that position it was extracted at the Hospital at Scutari, where the patient was confined for some time, and from which he was ultimately discharged convalescent. Whilst on his way home, inflammation set in, and he was obliged to be landed at Gibraltar, where he was confined for a long period, and finally the knee became anchylosed in a very bad position. Nevertheless, this man was able to get into the Commissionaires, and to perform some light duty, but from the awkward position in which the limb was anchylosed, it was liable to injury and inflammation, and he was determined to get it rectified if possible.

On admission it was found that the joint was knit together by a perfect bony anchylosis, at such an angle that the toe could not be brought within four inches of the ground. The condyles of the femur were thrown forward, the patella, also perfectly anchylosed to, was thrown on the outer condyle of the femur, and the tibia and fibula were apparently tilted outwards. The knee was surrounded with cicatrices; there was a considerable amount of inflammation in the soft tissues, and evidence of a large abscess on the outer side of the thigh above the knee. The patient was in a fair state of health, although he was perspiring freely at night. The abscess was punctured, and a large issue of matter took place.

September 6.—The inflammatory action in the soft parts having subsided, the patient was this day brought into the theatre, and Mr. Smith operated in the following manner. A semilunar incision was carried over the knee below the patella, and a large flap was dissected upwards, so as to get plenty of room; the soft parts were then well cleared from the front and sides of the femur, about two inches from the centre of anchylosis, as also from the tibia at about the same distance, so as to include a wedge of bone, the base of which was four inches in length; the saw was then applied, first above and then below, in such a manner that a complete wedge of bone was formed and removed without difficulty, and no further section was necessary to get the limb perfectly straight. It was at once placed upon the ordinary excision splint, and when the patient was in bed was swung in a cradle.

8th.—There has been some oozing from the wound, and the inner corner of the flap looks sloughy; the patient is rather low. Ordered ammoniæ sesquicarb. gr. v., ter die, wine ℥viij.

12th.—A portion of the flap about the size of a crown piece has sloughed away, but the limb keeps in good position. The patient has had a rigor, followed by some fever, but this is in all probability due to the circumstance of his being moved to another ward. Ordered quinæ sulph. gr. iss. ter die.

26th.—Steady improvement has been going on since last report, healthy union of the flap is taking place, and the loss of surface produced by the slough is not larger than the size of a shilling.

October 21.—Doing well, but an abscess has been forming just below the knee, on the inner side; this was opened this morning with great relief.

27th.—This day the limb was removed from the excision splint, and a wooden one was adapted to it.

November 19.—The wound is now almost entirely healed, and the limb has become so firm at the site of operation that the patient is allowed to leave his bed and move about the ward on crutches, the precaution having been taken of adapting a strong gutta-percha splint to the posterior and lateral portions of the limb. The limb is perfectly straight, and on the operated side the heel is only one inch from the ground when the patient stands upright.

December 9.—The patient has grown quite stout, and the limb has become so firm at the site of operation that he was this day discharged.

I have deferred the publication of this case until the lapse of a year, in order that I might have an opportunity of thoroughly testing the success of the treatment. One of the objections advanced against excision of the knee is, that an efficient limb is not obtained, and that the patient does not possess so much advantage as one wearing a wooden leg. Of course this point can only be set at rest by experience, and observation of our cases a sufficiently long period after operation. A year will generally test the reality of success or its failure. In several instances I have noticed a limb thoroughly strong and efficient in three months; these are, however, exceptional. I had heard that H. had got into employment long since, but in order that there might be no mistake about the matter, I ascertained his address, and received on September 1 a communication from him in which he states:—"My health is good, and my limb is all that could be desired. I have walked many a long journey with it, with nothing but a walking-stick as an assistant. I can walk three miles an hour with perfect ease. I wear one inch of cork in the inside of my boot, which makes up all the deficiency in length. My knee is quite tight and firm at the joint."

I have detailed this case at length, and by itself, because there are certain features connected with it which render it particularly interesting, and moreover, by it are well illustrated the nature and value of the operation of excision of the knee. In the first place, this kind of injury is somewhat peculiar, and the condition which obtained after the recovery of the man from his gun-shot wound, viz., true and perfect bony anchylosis, is not common; the circumstance also of the operation having been performed for the removal of a deformity which rendered the limb, although a "saved one," almost entirely useless to this man of large and powerful frame, adds greatly and peculiarly to the interest and value of this case. A furious outcry was made against excision of the knee-joint for incurable disease when the operation was revived by Mr. Fergusson, and for some time it seemed doubtful whether it would hold its ground, but when—thanks to the spirit of conservatism in Surgery which animated the Practitioners of the British Isles—its value and expediency in disease of the joint was fully and fairly acknowledged by all except those who, like the Bourbon kings, "have learned nothing and forgotten nothing," the question of the propriety of the operation in instances of deformity produced by old disease or injury was entertained by one or two Surgeons, and the results have been such that a new field, as it were, has been opened up in connection with the subject. There are, I know, many who stand aghast at the idea of this apparently formidable operation being put in practice for the sake of rectifying a crooked leg where all disease has ceased; and probably some considerable further experience on this point will be necessary to induce those Surgeons who do not hesitate to excise a knee-joint for disease to adopt the operation in cases of complete or incomplete anchylosis. I venture, however, to predict that the opposition to this treatment of deformity, in certain instances, will be withdrawn before long, when in fact a few more such cases as I have detailed have been made known.

Great care, however, will be necessary in the selection of the cases in which this operation is to be carried out. In an instance like the one just related, where the anchylosis is bony, and the limb useless to the patient there cannot be a doubt of its propriety. There are also cases not unfrequently met with where disease has been going on in the knee for some years, its severity has been checked, but the limb is only partly anchylosed, and in such a contracted state, that, practically, it is useless to the patient, from this cause alone. Independent of this, however, so soon as the patient attempts to get about, symptoms of renewed mischief show themselves, and a chronic state of irritation exists. Here, also, excision of the knee will rectify the deformity and save the patient months and perhaps years of suffering. There is another class of cases where disease has entirely ceased, and fibrous anchylosis of the knee in such a position as to render the limb useless has taken place. The operation may be performed here, but undoubtedly we possess other means of rectifying the deformity, such as the continuous extension of the limb in a proper apparatus, or the employment of sudden force, so as to rupture the fibrous union, and thus get the limb straight, and a trial should be made of these before excision is resorted to. If these means fail, as they will occasionally, excision is justifiable; for it must be borne in mind that, after excision, we shall probably, nay almost to a certainty, obtain a bony anchylosis, which, in the case of the lower limb, is far superior to a fibrous anchylosis, even with the extremity in the best position.

Caroline-street, Bedford-square.

ON

TWO SUCCESSFUL CASES OF CÆSARIAN SECTION.

Communicated by Dr. GABR. TAUSSIG, Rome.

A FOREIGN Medical man visiting the museums connected with the Hospitals of London cannot but be astonished at the multiplicity of ovarian cysts there displayed, and the marvellous results which he learns on reading the history of the individual cases must lead him to believe that similar operations ought to be performed in his own country also. For my part, I will not fail, on my return to Rome, to engage the distinguished Surgeons there to undertake the ovarian excision whenever a case with the proper indications occurs to them; and I would insist on the point regarding the true indications, as without them, and as long as the patient can be relieved by paracentesis, or by other means in practice, I would not consent to so serious a performance.

I indulge in the hope that my Roman colleagues may be as successful in this operation as they have lately been in several cases of Cæsarian incision, both as regards mother and child. Two of these cases having been lately brought before our yet small Medical Society, I now give a short account of them.

The first operation was performed on a woman aged 22, 3 ft. 8 inches high, and with the diameter of the pelvis only 2⅛ inches, as determined by repeated measurement at the Hospital of S. Rocco, where she was awaiting her confinement.

The following points appear to me the most important in relation to this operation, as performed by Professor Panunzi:—He began as soon as the os uteri was sufficiently dilated after labour had set in, and when he had satisfied himself that the child was alive. The first incision was made two lines distant from the linea alba, and on the left side, so as not to injure the "ligamentum umbilicale hepatis." Great care was taken to avoid wounding the fundus uteri, the operator being convinced that, through their different directions, the fibres of the fundus prevent the approach of the edges of the wound on the lower part of that organ.

The liquor amnii having escaped at the beginning of labour, the child presented itself directly after the incision of the womb, and the operator extracted by its lower extremities a healthy boy. Thus, too, he acted with the placenta on the next contraction of the uterus, after having detached its adhesion to the internal surface. This circumstance caused a hæmorrhage, which, by cold applications and by a compress on the aorta abdominalis, was soon removed. As for the re-union of the wound on the parietes abdominis, Professor Panunzi chose the application of adhesive straps, an inch in breadth, surrounding the body one and a-half time, and leaving a small angle at the lower part free, as an outlet for any fluid that may have still remained in the abdominal cavity. He adopted this plan particularly, because he ascribed the development of peritonitis and subsequent loss of the patient in a former case to the employment of the "sutura cruenta." The patient having been duly bandaged, cold applications were ordered for three hours.

On the fifth day the wound was healed, and all went on regularly afterwards.

The second case was that of a woman operated on soon after the former one by a young Surgeon, M. Cocchi, who, with some modifications, used the same method and precautions as just pointed out. The operator himself modestly ascribed the happy result to the circumstances that the operation could be performed at the right time, and that neither hæmorrhage nor convulsions complicated it, and also that snow was applied during the first few days after the operation.

In both cases the mother and child continued to go on well.

Now, it is not my intention to institute a comparison between this important operation and that of ovarian excision, or to discuss which of these offers the greatest difficulties. In the ovarian excision one cavity only is opened; in the Cæsarian section the operator has to penetrate into two. On the other hand, it must be borne in mind that the accoucheur knows what will be found, which is far less the case in the ovarian operation, where many difficulties may arise which could not be foreseen.

There exists, no doubt, some analogy between the two operations, and the successful results of one may encourage the undertaking of the other.

REPORTS OF HOSPITAL PRACTICE

IN

MEDICINE AND SURGERY.

TORBAY INFIRMARY.

CASE OF POISONING BY A MIXTURE OF CHLOROFORM AND OLIVE OIL IN AN OLD MAN—RECOVERY.

[Reported by Dr. W. Bathurst Woodman.]

On February 20 last, my friend, Mr. W. Hartland, Parochial Surgeon, sent to me for the stomach-pump belonging to the Infirmary, as he had a case of poisoning a few doors off, and also requested that I would come with the messenger. On arriving at the house, Mr. Hartland informed me that his patient, a bed-ridden Irishman, aged 72, who had long suffered from chronic bronchitis, dilated heart, and spasmodic asthma, had about an hour before swallowed a wineglassful of liniment which he was accustomed to use "for the rheumaticks." It had been given him in mistake for a mixture, by his little girl, who was only nine years old. He had very soon become foolish, then excited, and in less than an hour quite insensible.

We found him cold, with slow imperfect respiration, pallid face, and almost pulseless; indeed we could not count his pulse. His pupils were contracted, but still acted slightly when a strong light was brought close. At first the friends were so confused and frightened, that we could not get sight of the bottle containing the poison, but heard that it was a liniment. A message was therefore sent to the druggist who had given it, who returned answer that "it was no harm," but refused to give its composition. Our efforts to rouse the patient were so far successful as to make him swallow an emetic, but this produced no effect, and he relapsed into insensibility more profound than ever. We therefore introduced the stomach-pump, and this, although it soon became choked with food, was effectual in producing free vomiting. We then found that oil was freely mixed with the dark, somewhat bloody, and very stringy mucus which, with half-digested food, formed the ejected matters. Still uncertain what he had taken, although from the coma and contracted pupils we judged it to be a narcotic, we decided on giving him strong coffee and a little brandy, and to continue some cold affusion, flapping his hands with a wet towel, etc., whilst hot bottles, mustard, etc., were applied to his feet. At this juncture, the liquid which was given in mistake was found, and appeared to consist entirely of olive oil, with a faint, sweet smell. On tasting it, however, we found the sweet, pungent taste of chloroform; and on further examination it was found to contain nearly 50 per cent. of that agent. The quantity actually taken must have been ℥j. nearly. At 4 p.m., three hours after taking the poison, he was considerably roused, and could articulate, but shortly became again comatose, and his respiration of the "piff-paff" character. We continued the flapping with wet towels, and the strong coffee, and he soon became better, but began to talk foolishly, like a drunken man. In half an hour he recognised his friends. He said the first thing he felt was that the "physic burnt him." Next day he was very weak, but his breathing was easier than it had been for months. The day after he still felt weak and drowsy, but has now quite recovered, and he has never suffered so much from dyspnœa since. There was at the time no paralysis of the sphincter, and his breath was so foul from decayed teeth, etc., that it gave no clue to the poison. I regret that his urine was not saved by the friends, so that I could not ascertain if the reaction of sugar was present on the first day. Forty hours after I found none.

THE LONDON HOSPITAL.

POISONING BY PHOSPHOR PASTE—AUTOPSY.

(Under the care of Dr. FRASER.)

[Reported by Mr. John Dawson.]

Phœbe L., aged 27, was admitted into the Hospital, July 24, 1863, at 11 p.m., having taken the contents of a jar of phosphor paste, used for destroying rats. The exact quantity of phosphorus it contained was not known.

Symptoms on Admission.—She appeared drowsy; the lips and face pale; tongue thickly coated; breath smelt strongly of phosphorus; did not complain of any pain, but of a burning sensation only in the stomach, and craved for cold water to drink. She had vomited several times before admission, but had been given an emetic of sulphate of zinc in warm water, and afterwards about two pints of warm water to encourage the vomiting. The matters vomited consisted of the water taken, with a white flaky substance floating in it. She was put to bed, and at 1 a.m. she had about half a pint of milk thickened with carbonate of magnesia, which was repeated at intervals during the night. Milk *ad libitum.*

25th.—She had vomited several times during the night, but felt a little better. Ordered milk diet and strong beef-tea. To continue the magnesia and milk.

27th.—Complained of slight tenderness in the epigastrium, but had no distension nor retraction of the abdomen. Pulse 90, weak; skin moist, and not particularly hot; there was a peculiar garlicky smell on approaching the bed. 8·30 p.m.—The pain in the epigastrium had increased, and the bowels had been purged, and she had vomited several times. Ordered one-third of a grain of morphia at bedtime, and eggs beaten up with milk frequently during the night.

27th.—11 a.m.—Appeared very drowsy; pulse increased in frequency (110), and weak; could not bear the slightest pressure over the stomach; tongue dry, and brown down the centre; great thirst; breath had a garlicky odour. The surface of the body had a general bluish appearance; the left foot was of a dark bluish colour and cold; the right foot appeared normal. Ordered wine, ℥x.; mist. vin. Gallici, ℥j. 2 dis horis sumend. She continued getting more drowsy, and died comatose at 2·15 p.m., sixty-three hours after admission, but how many hours after taking the poison was not ascertained.

Autopsy not until Fifty-one Hours after Death.—[The body having been removed from the Hospital, there was a difficulty in obtaining the autopsy.] Body well nourished, rigor mortis slight. On the head and chest are signs of commencing putrefaction, abdomen very much distended with gas. Chest.—Lungs gorged with dark blood, otherwise healthy. Heart.—Valves healthy, muscular structure pale and easily torn; its cavities perfectly empty; venæ cavæ empty. Abdomen.—Liver pale, and easily torn by the fingers; it appeared to be fatty. Kidneys healthy; medullary substances hyperæmic. Spleen very full of blood. Stomach externally pale, distended with gas, having a strong smell of garlic; no perforation; mucous membrane of a dusky-red colour at the cardiac end, and the mucous membrane was raised in patches, about the size of a sixpence each, apparently with gas. Intestines pale and distended; at the lower part of the ileum there were vascular patches. Brain.—The meningeal vessels, the cerebral substances, and the sinuses were all hyperæmic. The blood was of a dirty red colour, and of a syrupy consistence; it contained no coagula, but was not examined microscopically or chemically.

HULL INFIRMARY.

For the following cases we are indebted to Mr. C. J. Evans, House-Surgeon to the Infirmary:—

PARTIAL EXCISION OF ANKLE.

(Under the care of Dr. KING.)

Mary R., aged 45, a stout, corpulent woman, was admitted on May 5 with dislocation of the foot backwards, of ten days' standing. She had fallen and twisted the foot, but had been unable to procure Surgical advice till now. The astragalus was forced backwards with the rest of the foot; there was a sore over the inner malleolus, healing, and a fracture of the fibula in the lower fourth.

The sore had healed by June 1. A semilunar incision was made over the inner side and front of ankle, and the inner malleolus cut off with bone-pliers. The tibia was then seen to be partly in front of the astragalus. Reduction could not be affected until the tendo-Achillis was divided (subcutaneously). The foot was then brought into a much better position, though not perfectly reduced, and a splint was applied so as to keep the foot from falling away. It was kept on after the wound had healed, and she was discharged on August 3, there being some amount of motion in the joint.

OPERATION TO AID REDUCTION OF FRACTURED TIBIA.

(Under the care of Dr. KING.)

John A., aged 35, a tallowchandler, admitted on the morning of December 25, 1862. He had been in a frolic the previous night, and had jumped from a window to the ground, a distance of about eleven feet. There was a very oblique fracture of the tibia just below its middle, with a small punctured wound (made by the bone), from which blood freely issued. The fibula also was fractured. The limb was placed on a Macintyre splint.

Great swelling of the limb came on, with feverishness and sleepless nights. A slough formed over the bone, and it protruded through the wound. The fracture was very oblique, and the projecting end of the bone was extremely sharp.

January 12.—The limb was placed on its outer side, with the knee bent, between pasteboard splints, but recourse was obliged to be had to the Macintyre's splint again, as the limb could not be kept steady. It was found impossible in any way to keep the projecting portion of bone in position, so on the 17th an inch and a-half of the projecting portion was sawn off, and the two ends were then easily brought into good apposition. The wound granulated healthily.

24th.—An abscess had formed on the outer side of the leg, and was opened. A portion of the fibula was thought to be felt rather loose at this time.

31st.—The incision previously made on the outer side of the leg was enlarged (under chloroform), and a portion of fibula, nearly four inches long, withdrawn. Limb placed in ordinary wooden fracture-box. There was a great amount of discharge, and the man's strength was sustained by nourishing diet and stimulants. The limb quickly improved in appearance, the wounds healed, and the bones had firmly united by the beginning of May. He was discharged cured on May 29, with a starch bandage on the leg.

Recently seen. The limb was of very good shape, though, of course, shorter than the other, and a much better result than could have been anticipated was obtained.

SPLITTING OF A URETHRAL STRICTURE.

(Under the care of Dr. KING.)

Isaac G., aged 60, agricultural labourer. He had been the subject of stricture of the urethra for many years, but the difficulty of micturition had increased the last few months. He had attended as an out-patient for a few weeks, and was admitted into the house for the purpose of having the stricture split after Mr. Holt's method. A No. 5 catheter could be passed into the bladder, but as he was very anxious to be cured as quickly as possible, it was determined to operate on him in the way above mentioned.

On June 6, Mr. Holt's instrument was introduced and the stricture split, three gauges of the stilette being used. A No. 10 catheter was then passed at once into the bladder and tied in. The instrument was stained with blood on its withdrawal.

June 7.—The catheter slipped out of the bladder during the night; he had had no pain, and he passed urine freely, in a much larger stream, he said, than he did before.

8th.—He said he was quite well, and would not remain in the Hospital any longer.

REMOVAL OF CALCULI FROM THE URETHRA (WITH STRICTURE).

(Under the care of Dr. KING.)

Jacob H., aged 56, by occupation a groom, admitted on December 26, 1862. He had been the subject of stricture of the urethra for many years, but had never had any Medical treatment until a day or two before admission, when he was unable to pass water, and applied to a Surgeon, who drew it off for him, and told him he had some stones in his urethra. A catheter was introduced, and a long stricture found to exist in the anterior part of the urethra, with a calculus impacted in it.

31st.—After the patient had had a warm bath, by means of a small lithotrite, urethra scoop, and forceps, several entire calculi, with much *débris*, were extracted. Most of the calculi were cylindrical and short, and apparently moulded to the urethra. One of them had several facets; all were of a pale fawn colour. Some little hæmorrhage occurred.

January 3.—Two or three more calculi, similar to the others, were extracted from the back part of the urethra. One or more still remained at the neck of the bladder, and could not be seized.

Several fragments were removed upon another occasion, and he left the Hospital at his own request on January 27, much relieved.

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Medical Times and Gazette.

SATURDAY, OCTOBER 10.

◆

THE REAL GRIEVANCES OF THE ARMY MEDICAL OFFICERS.

That the Medical officers of Her Majesty's army have grievances is proved by this single fact,—that overcrowded as our Profession is,—difficult as it is to find anywhere an "eligible opening" for practice,—disheartening as is the position of many of those brave and noble-hearted young fellows who set themselves down in some remote country place to begin their career by union practice and attendance on the village poor at village prices,—repulsive as is the tyranny of boards of guardians and ignorant country patients, —monotonous as is the life of a country doctor, snubbed as he is by insolent county people, and almost as destitute of change or relaxation as a serf *adscriptus glebæ*,—yet the young members of our Profession prefer all this to entering the Medical service of the army, where they would have a comparatively good pay at once, the certainty of frequent change, the possibility of the most stirring adventures, and a rank and social status which admit them as a matter of course to the highest and best society.

Yet so it is. The Army Medical service is *cut* by the English students. Out of 36 candidates at the last competitive examination, it is whispered that 30 were Irish, 4 Scots, and 2 English.

Old Army Surgeons do not like this; and we think that they are right. It cannot be good for the public service that any nationality should have an entire predominance; and we must bear in mind what has been more than once made public in this journal, that Irish Medical students may be a peculiar and protected class. They come, perhaps, from the Queen's Colleges—institutions supported by the State—in which the M.D. can be turned out at far less than the prime cost of the English article. So they come forward and accept service on terms which the English think degrading, and thus cause those concessions to be postponed which the War Office must yield if the Irish did not condescend to take what the English reject.

Grievances, then, there are. But we find that it is the opinion of many of the seniors of the service that some of them are overrated and deter men without due grounds, whilst others are hardly considered enough. We must confess that some of the senior officers' arguments deserve to be noticed. In the first place, we may notice a set of regulations, of which the Director-General commonly bears the blame. A Surgeon sends up a recruit, who is rejected; thereupon the Surgeon is compelled to refund the money, perhaps £30, which has been expended on this recruit. Hence it is said, Surgeons don't care to incur the responsibility of passing recruits, and there is difficulty in getting men to fill the ranks.

Now, it is asserted that there is no ground whatever for complaint in this case. If a Surgeon through *gross carelessness* makes a mistake, which exposes the public to loss, it is absolutely fair and necessary for the protection of public interests, that he should be made to pay. In this respect he is no worse off than the colonel of a regiment, or the Director-General, or any other public functionary; or, in fact, than any other man in any situation of trust, civil or military.

But, as we are informed, Surgeons sometimes do not expose themselves to the risk of being mulcted from ignorance, nor yet from carelessness, but from the deliberate attempt to set their own opinion against the laws and regulations which are issued for their guidance. Suppose, for instance, a Surgeon should send in a recruit with an imperfect eye, or no teeth, with marks of cupping or leeches on the chest, or other *evident* marks of chronic disease? We do not speak of cases in which Professional opinions may differ as to the facts. No man ought to be liable for errors of judgment; but for wilful neglect of instructions, amounting to insubordination, there must be punishment; and what shall this be? Shall it be settled by a court-martial? Shall it be fine or imprisonment? Something there must be, as we are assured, for the sake of discipline even amongst Medical men.

There are other cases which form the subject of complaint, for example, an Army Surgeon allows a sick soldier to go home to his friends, and a bill comes in for Medical attendance, or certain extras are provided, and the Surgeon is made to pay. Now, in such cases, we are assured that no Surgeon who obeys his instructions runs an atom of risk: if, for instance, a soldier is ill, he ought to be attended in Hospital, and not be allowed to go out on furlough.

We have said that these regulations are coupled in the minds of many Army Medical Officers with the present Director-General. It is said that he has been the Commander-in-Chief's private Medical adviser, and that *therefore* he sacrifices his Profession to please the Duke of Cambridge. We do not see the force of the argument. It should rather be said, that a man who has served the Duke in that capacity has many more opportunities of befriending his Profession than another could have, and that the Duke can have no motive to degrade the Profession. We would invite discussion on the question: do Army Surgeons really deserve to be occasionally mulcted? Are they more frequently mulcted under the present Director-General than under his predecessor? These are points on which further information would be desirable.

A second grievance is the Confidential Report. This may be abused, and its abuse should be carefully guarded against, yet it seems reasonable in principle, because it enables the Director-General to judge of the special qualifications of each individual, and to select such as are fit for special appointments.

The presence of the Surgeon at the branding of deserters with the letter D. is another grievance. There is no doubt, however, but that at every punishment there should be official superintendence. The High Sheriff, or his deputy, with the Goal Surgeon, is present at executions; and so the Surgeon may be present at a branding, to see that no needless injury is inflicted through ignorance or want of care. But he should not be alone—the punishment ought to be inflicted openly upon parade, and the commanding officer should be there as well as the Surgeon, so that it may not be considered that the infliction of punishment is the special province of the Surgeon.

The foregoing grievances, however, are not sufficient, in the opinion of many elder men, to deter anyone from entering an honourable career. But there are others which must be removed ere the Service can be sought for by the best set of students.

The pay of an Assistant-Surgeon on first entry is 10s. per diem, with quarters, fuel, and light, and a servant from the ranks, or 1s. a-day instead. This is fair enough. After five years' service, the pay is 11s. 6d. a-day; after ten years', 13s. Then no further increase until promotion to the rank of Surgeon, then 15s. After fifteen years' service, 18s.; twenty years', 22s.; twenty-five years', 25s.

No further increase of pay occurs until promotion to the post of Deputy-Inspector-General, who receives 28s. a-day. If he has served twenty-five years, he gets 30s.; and if thirty years, 34s.

An Inspector gets £2 a-day on appointment, and £2 5s. if he have served twenty-five years. And so in the higher ranks the full pay *seems* pretty fair, and would be so really if promotion to these ranks came within any reasonable period.

But it does not. The Assistant-Surgeon may remain an assistant for ten, twelve, fifteen years, or more. Very few, indeed, live to reach the higher ranks. A Surgeon is obliged to serve for twenty-five years before he is allowed to retire. If it be true that out of a little over 1000 Army Medical Officers, the deaths and retirements through ill-health, and resignations from other causes, amount to fully fifty per annum, it will be readily gathered that only the roughest and toughest, unless aided by great good luck, can expect to live long enough to get to the top of the tree.

The half-pay regulations are unlike, and more unfair than, those of any other branch of the service. There is a sick rate and a sound rate. One for those who complete twenty-five years' service on full pay; another for those who lose their health—and no Surgeon can claim retirement at all unless he has served the twenty-five years on full pay.

Now, we think that here lies the substantial grievance. A Medical officer is an expensively and specially trained person. He brings into the army at 23, if he have gone through a good

Professional education, what ought to be equivalent to five years' service. It is proved that the influences most destructive to life, are not bullets and bayonets, but hot sun, moist swamps, fœtid ditches, poisonous hospitals, contagious fevers, and ceaseless responsibility. The Medical officer is not devoid of the risks of the combatants; but he has all the others in a tenfold ratio. It is therefore but equitable that he should be allowed to retire after twenty years' service at the same rate now allowed for twenty-five, and that after twenty-five years he should be entitled to the pay and allowances of Deputy-Inspector.

Doubtless there are many important particulars besides in which the position of Army Surgeons may be altered to their benefit and that of the service. More of military distinction, salutes, etc., and the other cheap honours due to men who carry their lives in their hands ready to give them up for the good of their country, ought to be conceded. Yet our own personal observation has led us to wish that some Army Surgeons would think more of themselves as Surgeons, and less as officers. The Surgeon should keep his position amongst his brother officers, not by claiming power in military matters, which are not his province, but by cultivating his own Profession, and setting an example of the modest demeanour of a man whose office it is to save life, and who shows that he is in earnest.

We have thus endeavoured to state fairly the major and minor grievances of which the Department complains, and have given full weight to the arguments by which, on the ground of public interests, some of the latter may be defended. We wish it, however, to be clearly understood that there are real causes at work interfering with the efficiency and popularity of the service, and we appeal to the Profession to endeavour through Parliament to effect their removal.

THE WEEK.

THE EARTHQUAKE OF 1863.

The slight shock of earthquake which has startled us is no new phenomenon in the history of these islands. The great central volcanic tract of Southern Europe, including as it does the Grecian Archipelago, the volcanic region of Southern Italy, Sicily, Southern Spain and Portugal, and extending thence to the North-West part of Africa and the Canaries, is sufficiently near for tremors and vibrations to be propagated to these islands through the crust of the earth, just as sound travels through air. The regular and gradual subsidence and upheaval of portions of the Continent are, in all probability, as much owing to igneous forces acting in the interior of the earth as is the earthquake or the eruption of the volcano. History speaks of more than 200 shocks of earthquake having been experienced in Great Britain. But none of them have been severe. The same from time to time have been felt in Northern France and Germany, and they must not be accepted as proof that this portion of Europe is anything more than a remote border land of a volcanic tract. The phenomena attendant on earthquakes, and their influence on animal life, apart from their directly destructive effects, have been hitherto but little studied, but it has been a general belief that convulsions of the earth have been directly connected with widespread epidemics. We need only refer to Professor Hecker's well-known treatise on the "Black Death," to remind our readers of the telluric phenomena which preceded and accompanied that widespread devastation. As in volcanic eruptions, so in earthquakes, gases of various kinds, such as carbonic acid, sulphurous and muriatic acids are discharged, and it is quite possible that mephitic gaseous matters thus escaping from the earth's interior may affect the living forms on its surface. Again, earthquakes are frequently accompanied by meteorological and electrical disturbances which directly influence the animal frame. It is not probable that in this country such effects should be produced. As we have said, the shock we have experienced is probably only a wave of motion propagated from a distant region. But its occurrence reminds us of physical influences on which we may speculate, but of which we are at present profoundly ignorant.

NEW WORKS AND NEW EDITIONS.

We are glad to see that there is the prospect of an unusual number of new books during the ensuing session. Professors Syme and Miller promise new editions of their "Principles and Practice of Surgery," Dr. Macleod, of Glasgow, is going to publish some "Outlines of Surgical Diagnosis," and Mr. Gant, "The Principles of Surgery, Clinical, Medical, and Operative." Amongst new books on special Surgical topics we are to have from Mr. John Wood, "A Surgical Anatomy of the Pelvis and Perineum in the Infant, Young, and Adult Male and Female;" from Mr. Nunn, "The Ward Manual; an Index of Surgical Disease and Injury;" from Mr. E. Canton, "A Treatise on the Arcus Senilis;" from Mr. Bryant, "The Lettsomian Lectures on Surgical Diseases of Children;" and from Mr. Gamgee, "Some Clinical Lectures on Fractures of the Limbs." In the department of pure Medicine we may expect a second edition of Dr. Aitken's "Science and Practice of Medicine;" a new book on Medicines, *i.e.*, Materia Medica, by Professor Garrod; a fourth edition of the well-known "Manual" of Dr. Royle and Dr. F. Headland; and a "Manual of Practical Therapeutics," by Mr. Waring. Most of these works on Materia Medica will not appear till the new Pharmacopœia is published. In the Obstetric Department the venerable Dr. R. Lee proposes to publish some "Consultations in Midwifery;" Dr. Hall Davis, a new edition of "Difficult Parturition;" and Dr. Swayne, a fourth edition of his "Obstetric Aphorisms." "Diseases of Women" will be treated of in a new work by Dr. Graily Hewitt, and in a new edition of Dr. Fleetwood Churchill's work; and Mr. Spencer Wells will bring out his promised work on the "Diagnosis and Treatment of Diseases of the Ovaries." Amongst monographs we see announcements of works on the "Throat and Laryngoscopy," by Dr. G. Gibb; a second edition of "Dr. L. Beale on the Urine, Calculi," etc.; a new work on "Intra-Thoracic Cancer," by Dr. Cockle; one on "Arrest of Phthisis," by Dr. Andrew Clark; and on "Paralysis," by Dr. Meryon. Diseases of the Skin are treated of in new works by Drs. Tilbury Fox, M'Call Anderson, J. L. Milton, and David Logan. We also see advertised a new "Manual of Comparative Anatomy," by Professor T. H. Huxley; one on "Practical Anatomy," by Mr. C. Heath; one on "Animal Chemistry," by Dr. Thudichum, and a "Manual of Practical Hygiene," intended especially for the Medical officers of the army, by Professor E. A. Parker.

HOSPITAL ABUSES.

We have been favoured with a memorandum issued by the Medical officers of the Birmingham Children's Hospital, and the last of a series of articles on Hospital Management from the *Birmingham Daily Post.* As they record the first systematic attempt to cope with the greatest of Hospital abuses, we sincerely hope the regulations may work successfully. The article is too long for publication *in extenso* in our columns, but we cannot refrain from extracting the following judicious remarks:—

"Hospital managers are bound to take every precaution that the funds entrusted to them are spent on proper persons. They are equally bound to consider the welfare of the commonwealth, and not to frustrate the aims of legislators and philanthropists by encouraging a spirit of dependence and improvidence among the lower classes. They are bound to consider the rights of the Medical Profession, and not to make a Hospital a gigantic benefit club, with privileged recommenders, gratuitous Doctors, and well-to-do patients, with nothing to pay. Once for all, we declare that a Hospital Committee cannot honestly place these responsibilities upon other shoulders outside the walls. Still less have they a right to place the labour of investigating the pecuniary fitness of applicants upon their Medical officers. This is not work for the brains of a Physician, but of a clerk. It is always bad policy to employ unnecessary force for anything. Besides, a Medical man should only be known to his patient as such. He is neither a clergyman nor a relieving officer."

After strongly advocating the claims of benefit societies as a thoroughly English institution, now being imitated abroad, the writer explains the new system recommended :—

"The effect of these arrangements would be a great diminution of the out-patients, and the abolition of a frightful social wrong. It has been forgotten of late days that hospitals were not designed for every sort of case that chose to apply, but for important cases,—such as have already, for the most part, engaged the attention of Medical Practitioners, perhaps for months or years; or such as from their severe nature and other peculiarities demand more than ordinary skill and attention. They were never intended to supplant the private Surgeon or to supplement the workhouse, but to aid the efforts of Medical men to cope with the maladies occurring in a population consisting of poor persons just above the condition of actual pauperism. It has been, indeed, most justly said of them, that their great function is to give to the deserving poor those advantages, as regards obtaining the opinion of the most experienced Physicians and Surgeons, which otherwise would be monopolised by the rich. Now, probably, about three-fifths of the whole number of out-patients are cases of the most ordinary nature—applying direct to the Hospital without previously seeking advice elsewhere—making use of its funds as other men make use of their club Surgeon. The remaining two-fifths are important cases, requiring and seeking the best opinion, probably sent by their own Medical attendants, or, at any rate, coming with their concurrence. These cases would take up all the time for their proper investigation, which is now diffused, in so much hurry and excitement, over the vast mass."

The following is the memorandum issued by the Medical officers of the Children's Hospital :—

"MEMORANDUM.

"The Medical Committee have become aware of the frequent abuse of this charity on the part of parents bringing their children for advice and medicine, who were well able to pay the ordinary costs of these.

"They feel themselves bound by every social consideration to remedy this evil so far as possible, and therefore suggest to the Committee of Management the adoption of the following regulations :—

"They think it useful at the outset to define the principles which have guided them in their deliberations. They consider that the proper objects of the Institution are :—1st. The relief of those children labouring under ordinary maladies, whose parents cannot afford to pay for advice and medicine, and who yet are not in receipt of parochial pay.

"2nd. The relief of those children labouring under very severe or very protracted maladies, whose parents have already taken every means in their power on behalf of their children, and who are able and willing to pay their regular attendants, but who become desirous to have the advantage of the opinion of an additional Practitioner, and are unable to remunerate his services.

"Regulations :—

"1. That the dispenser shall give out the notes daily, between the hours of three and five in the afternoon.

"2. That in the absence of the Dispenser the House-Surgeon shall perform this duty.

"3. That previous to giving a note, the Dispenser shall institute a series of inquiries as to the pecuniary means of the parents or friends of the child, to embrace the following points :—

"A. The total earnings of family.

"B. The number in family.

"C. The nature, so far as he can learn, and the duration of the illness.

"D. The reception or non-reception of parochial relief at the time of application.

"E. The number of children for whom relief is desired.

"4. That in the event of the earnings of the family amounting to 21s. per week, the number of children not being more than three, the Dispenser shall refuse a ticket, supposing the case is one of ordinary illness of recent origin.

"5. That he shall refuse a ticket to the parents of a child the united earnings of whose family amount to 26s. per week, the children being more than three, supposing the case is of the nature specified in No. 4.

"6. That he shall refuse a ticket to persons in the receipt of parish pay, supposing the case is of the nature specified in Regulation No. 4.

"7. That he shall refuse tickets to more than two of one family at the same time, unless the cases are of great urgency or of contagious nature.

"8. That he shall refuse tickets, under all circumstances, to shopkeepers, beerhouse keepers, employers of labour, whether domestic servants or otherwise.

"9. That in the event of parents bringing a child for relief, suffering from a disease of unusual severity, or of protracted duration, or labouring under a condition requiring for its cure a delicate Surgical operation, a note shall be given to such parents, providing they do not fall under Regulation No. 8, even if their weekly earnings should amount to a sum above the maximum mentioned in Regulations No. 4 and No. 5, or if they should be in receipt of parish pay. In such cases, the above facts to be endorsed upon the back of the notes, for the further consideration of the Physician or Surgeon under whose care the cases should come.

"10. In the event of a case having been under the care of a qualified Medical attendant, and of that attendant furnishing a certificate of fitness, a note to be given without further inquiry. A certificate from a clergyman or minister of religion to be similarly accepted. The Medical Committee reserve to themselves the right already accorded to them by the laws, and by the express resolution of the Managing Committee, of admitting without delay, either as out-patients or as in-patients, children labouring under disorders of great urgency, as croup, hæmorrhage, scarlatina, or malignant sloughing, etc., etc. They propose, however, that in the event of the parents of such cases being in no proper sense of the word 'necessitous,' that the administration should be entitled to charge them such a sum per diem as will just cover the expenses of the class of patients to which they belong. In the event of refusal to comply with this regulation, the Medical officers propose to exercise their power to dismiss the patients.

"The Medical Committee are well aware that these regulations may have to be modified, as their experience in the adaptation of restrictions to improper applicants enlarges. But they believe that the principles embodied in the above regulations will be found of general and easy application. It is important it be thoroughly understood that the aim of the Institution is the relief of *deserving objects only*. The Committee therefore earnestly invoke the aid of the Medical men of the town in discovering attempts on the part of improper persons to obtain the benefits of this Charity, and they pledge themselves to investigate fully such cases of imposition as may be brought under their notice.

"They request, in conclusion, that every publicity be given to these regulations, that applicants may be put to as little inconvenience as possible."

THE BRITISH METEOROLOGICAL SOCIETY.

THIS Society has issued a paper inviting "the co-operation of those who may be willing and qualified to furnish the meteorological elements of places in the neighbourhood of which no adequate observations have hitherto been made." It is prepared to publish tabular statements on receiving the necessary materials in a shape ready for publication.

"In the desire of lightening the expenses of their contributors, and of ensuring the trustworthiness of the instruments they employ, the Council of the Society will be happy to forward, through one of their Secretaries, a simple outfit of the necessary thermometers and rain-gauges, verified and packed in readiness for immediate shipment and use, on receiving a prepayment of £2 10s. to meet their cost. The cost is liable to vary within small limits, according to the varying charges of the makers and the introduction of new classes of instruments, but it will in no case exceed the above-mentioned sum, and the surplus, whatever it may be, will be returned. The instruments included in the outfit are one maximum and one minimum thermometer; one ordinary thermometer, with a range adapted to the proposed station; one rain-gauge. The case or cases that contain them will be about ten inches long, and four to five inches wide and deep. Their weight will be about 2 lbs., and they will travel securely as an ordinary package."

The following extracts show parts of the process of meteorological observation:—

"*Observations on Heat.*

"1. *To Expose Thermometers.*—The instruments must be placed in a carefully-selected position, or all their results will be vitiated. Choose an airy place, where there is continuous, dense, and ample shade. There set up a box of not less than two feet in height, width, and depth. It must be constructed precisely on the principle of an ordinary meat-safe; that is to say, it must be roofed (and better still, double roofed) from the rain, and have perforated sides, whether of gauze, trellis-work, or Venetian blinds, through which the air may pass with perfect freedom. It must be fixed on a stand, or be suspended four feet above the ground. The thermometers should be hung on supports placed in the middle of the box, except where otherwise mentioned.

"*Daily Mean Temperatures.*—1st Method—This is the more accurate, but requires observations to be made twice in each day. Procure a jar or box, of not less than eight inches in length, width, and depth; fill it with dry sand, and set it in a properly exposed-box (§ 1). Place a thermometer upright in the middle of the sand, with its bulb buried from three to four inches below its surface. Note its readings twice a-day, at intervals of twelve hours, say at 9 a.m. and 9 p.m.; the mean of these readings may be accepted as the daily mean. 2nd Method: by observations made once in each day.—Hang a maximum and a minimum thermometer on supports, as described in § 1, and note their readings once daily, either in the morning or in the afternoon, and readjust the indexes.

"'The enclosure of a maximum and minimum self-registering thermometer in a large cask of dry sand, which might be opened and read off twice a-year, would also probably afford a very accurate mean result.'—*Sir John Herschell.*

"*Rain, Snow, and Dew.*

"6. These must be measured by a gauge, which should be placed on the ground or on a low stand in an exposed situation. The relation of the units of length and weight is such that the tenth of an inch of rain falling into a vessel whose mouth is a circular area of about two inches and nine-tenths in diameter (1·4467 inch radius) will weigh an ounce (Troy). Every medicine-chest contains a fluid ounce (Troy) measure.

"The meridian, or true north and south line, is obtainable as follows:—Set a straight stick or pole upright in a plot of level ground, by the help of a plummet. Loop a string to it, and, with the base of the pole as a centre, and the string as a radius, scratch a circle on the ground of such a size that the shadow of the pole shall fall somewhat within it at noon. Keep a sufficient watch on the shadow of the pole to ensure your being present when its top enters the circle in the fore-noon and leaves it in the afternoon. Mark the places where it cuts it. Lastly, bisect the interval between the two marks, and drive in a peg to note the place permanently. The pole and the peg will be in the same meridian line. It is best to draw three or four concentric circles, and to drive the peg in the line that corresponds most closely with the mean of the several independent determinations. If the compass be used, allowance must of course be made for the variation of the needle."

The office of the Society is 25, Great George-street, Westminster, and the President for the year is Dr. R. D. Thomson, the accomplished chemist, and President of the Metropolitan Association of Medical Officers of Health. The annual guinea subscription gives the privilege of admission to the library, *Transactions*, etc. Considering that the temperature, and the dryness of the air at any given place are the most important conditions of health, good or bad, it is not too much to say that the observation and record of these conditions would be a work most creditable to members of our Profession and useful to the public.

Royal College of Surgeons, Edinburgh.—At a meeting of the College, held on the 2nd inst., Dr. Andrew Wood, F.R.C.S.E., was unanimously re-elected representative in the General Council of Medical Education and Registration for the period of five years.

THE MEETING OF THE BRITISH ASSOCIATION AT NEWCASTLE.

(FIFTH NOTICE.)

(*From our Special Correspondent.*)

John White, Esq., Finchley.

On the Means of Passing Unharmed through Noxious Gases or Vapours.

Mr. White, in his paper, read in sub-Section D on Monday, August 31, said it sometimes happens that a person can do some useful act amidst irrespirable gas; and my chief object now is to describe a new and improved apparatus, by means of which a man can breathe amidst any irrespirable gas. There are various occasions on which such an apparatus, for enabling a person to breathe under such a condition, is required. It may be useful to state all the known means of entering and of breathing in foul air; and first, let us consider the means provided in the natural body for our protection when exposed to the inhalation of poisonous gases. If we do not enter it voluntarily, we can only hold the breath, if possible, until we escape from it; and we may continue to hold the breath an increased time by pinching the nostrils. If, however, we voluntarily enter the noxious gas, we should prepare ourselves by drawing in a very full breath slowly, and also exhaling it slowly and completely twice, and then drawing a very full breath, and entering the noxious gas immediately. By thus completely emptying the lungs and supplying them with an ample supply of fresh air, they immediately afterwards can be kept in action about three times longer than they could be immediately after ordinary breathing; and the cause of this is obvious; for as a given quantity of oxygen is necessary in a given time for the change of the dark venous blood into the life-supporting bright arterial blood, we perceive that, by as nearly as possible emptying the lungs of the air which is deprived of the oxygen, and substituting an unusually large supply of pure air, by a very full inspiration, we supply an extraordinary quantity of oxygen, which suffices for the proportionate extension of time. When the supply is exhausted, we must have it renewed, or die by suffocation. It has been suggested that breathing through a damp sponge or other porous matter fixed in the end of a pipe near the ground (as in that situation, when the air is artificially heated, it is less impure) should be used; but this method is not of much use. Another method that has been tried with perfect success is the same as that which is in well-known use for diving purposes. The air is forced by means of an engine through a pipe, and through an air-tight case, covering the man's head, and thus he is supplied with fresh air, breathing it as it is forced through his helmet. As in this case the head-cover is surrounded by foul air, and the engine in pure air, it may be necessary sometimes to use a great length of pipe, which will be inconvenient, inasmuch as the pipe is heavy, and liable to be fixed or ruptured accidentally by any obstruction, falling or moving bodies, or by being drawn into crevices. Some of the difficulties depending on the use of a long pipe have been overcome by Mr. T. Y. Hall, of Newcastle-on-Tyne, who has invented and published, illustrated with diagrams, a "plan for enabling a man to penetrate without delay to great distances; to abide there for some time; to obtain a knowledge of the circumstances, and act freely in underground excavations filled with dangerous gases." His plan is similar to that used, as before stated, by divers, as respects the passage of air driven through the covering of the man's head. It differs, however, as regards the pipe through which the air is propelled to the operator. The apparatus which is constructed by Mr. White, "for enabling a person to breath in noxious gas," differs essentially from any heretofore used. If any person will keep his mouth closed, and by closing and opening either nostrils so that he shall inhale by one alone, and exhale by the other alternately, and then insert a pipe into the nostril by which he inhales, he will understand the method of breathing with this apparatus as soon as it is described. It consists of two pipes fixed in a metal covering, which is placed over the nose and mouth. Each of these pipes is furnished with a valve of vulcanised india-rubber, one of which is fixed so that it can be moved only inwards, and the other only outwards. These valves are elastic, and of so light a material that they are opened and shut by the force of the air, moved to and fro in the act of breathing; and therefore when the air passes through these pipes, the person inhales only through one pipe, and exhales through the other. Having the end of that by which he breathes in a pure atmosphere, the air which enters the lungs is pure, though the person is surrounded by noxious vapour. This inhaling pipe may draw its supply from the open air at any distance from the body, or it may be supplied from a bag carried on the body. By this plan the supply is limited to the size of the bag, by that, though the supply is unlimited, by the length of his inhaling pipe. Sometimes one method and sometimes the other will be most convenient. The exhaled air passes through its pipe into the surrounding foul atmosphere. The flexible valve of the exhaling pipe completely prevents ingress of the surrounding gas, and therefore the pipe is short; it need not be more than half an inch in length. The part of the apparatus described, and which is called the "orinasal cover" and air pipes, is fixed in that part of a hood which covers the face. A tippet made of waterproof cloth is joined to the hood. Two circular pieces of glass are fixed in the hood for enabling the man to see. Every part of this airproof hood where the metal is fixed is water-tight. When this apparatus is about to be used, a soft thick kerchief is to be wrapped smoothly round the neck. The hood and tippet is then put on. A band bound round the head and face over the hood, to keep the orinasal cover in its place, with a kerchief bound round the neck over the tippet, to prevent any foul air passing under it, the waistcoat and coat should then be buttoned and secured over the tippet for the same purpose. The means are so simple, and seem so slight, that a man may naturally hesitate to enter a poisonous gas with such protection; but if the apparatus be water-tight (which should be tested by trial with water, just before using it) he need not fear; for Mr. White has tried it repeatedly in the fumes of burning sulphur, in the sight of many witnesses, and it has never failed him. When the apparatus is used with an inhaling pipe extending into the pure air, the end may be fixed there or held by an assistant, and conversation at the same time can be carried on between the wearer and his assistant through the pipe. When it is used in this manner a cord may be fastened round the person using the apparatus, and the other end held by the assistant outside, so that the man may be hauled out, if, through any accident, such a proceeding should be necessary. When the apparatus is used with an air-bag, it is attached to the back, and one end of the inhaling pipe communicates with it. A smaller air-bag is also connected by means of its own pipe, having a stop-cock, with the common inhaling pipe. The use of this small air bag is, that the man may have its contents in reserve as soon as his larger store is exhausted; that he may know it is time to replenish his bags when his larger bag is empty. It might be useful to have one or more bags of air furnished with stop-cocks, and proper unions kept in reserve in places such as coal mines, where they may be required, so that a man using the apparatus could attach a full bag to it when necessary.

Robert Wilson, M.D., Castle Eden,

The Coal Miners of Durham and Northumberland, their Habits and Diseases.

This most valuable paper, read on Tuesday, September 1, created intense interest. The author opened by saying that we search in vain amongst the works on biology for a satisfactory definition of life. Our recent writers on the subject consider life as a nonentity—that, *per se*, it has no existence. And absurd as it may appear to suppose that that does not exist which all are conscious of possessing, this idea is, perhaps, as near the truth as it is possible for us to get. For convenience it is well to have a phrase to express the phenomena manifested in vital organisms,—that of Beclard is, perhaps, as good as any, viz., that life is organisation in action. Death may be said to be the opposite condition to life. For similar reasons death cannot be defined; but as is the case with life, a definition is not of much practical importance, as all conceive correctly with regard to it. The Medical man has to deal with a state which may be said to be one of transition from life to death, viz., disease; and however unimportant it may be what theory we adopt as to the nature of life and death, it is of great consequence that we form a correct conception as to the real nature of disease; and, unfortunately, it is very difficult indeed to say whether most error exists on the subject amongst the educated or the uneducated. The cause of this is evident. All consider disease to be an entity, whereas, like life, it is a nonentity; it cannot exist *per se*, and can only be recognised as a state or condition, and that state or condition being modified, prevented, or suspended vital action. Supposing, then, vital action to mean what is understood by life—modified or prevented vital action what is understood by disease, and cessation of vital action as what is understood by death, we find that the two latter states—disease and death—are induced by influences brought to bear on the former state—life. It is thus the part of the Physician not merely to relieve suffering and restore the balance of vital phenomena where deranged, but also to endeavour to detect and point out those influences which modify and destroy vital action, and which induce the states known as disease and death. By so doing his good offices will benefit not only those who live with him, but also the generations which are to follow. The object of this paper was not to add any new fact to physiology, nor to detail any new form of disease, but to show what effect the exclusive habits and occupation of the coal miner of the North of England have on his health and length of life. The pitmen live in villages built expressly for them, at a short distance from the shaft of the pit. The village consists of parallel streets or rows of houses. There are single rows and double rows. The houses are built end to end. Those in the single rows have one principal apartment, the size being about six yards square; a pantry is attached behind, and there is a half story or garret above. There is a front door and a back door, and the windows, one in each apartment, are made to open by drawing the one half in front of the other. The houses in the double rows are about twice the size of those in the single ones; they are divided into two principal apartments by a partition running lengthways, with a communicating door in the centre of the partition. When a scarcity of houses exists on a colliery, the communicating door in the centre of the partition is built up; and, as in the single houses, each has a front door and a back door, the double house is easily converted into two single ones, and is occupied by two families instead of one. This, although a convenient, is by no means a salutary arrangement, the single houses built end-to-end being much more healthy than those built back-to-back. The double houses are occupied by men who have grown-up sons at work in the colliery. The single houses are occupied by men who have young families. Married men with no children can scarcely be said to exist amongst them. The floors are laid with a composition of lime, small coal, and gravel. The fire range is large, and fitted with an oven and a boiler, for a constant supply of hot water. They have a plentiful supply of small coal, and the fire is never allowed to go out from one end of the year to the other. Generally the houses are clean and comfortably furnished. A four-post bedstead, eight-day clock, and a mahogany chest of drawers, have always been, and are still, considered the essentials of a well fit-up house. The ornaments hung on the walls might form a rich field for psychological study; from them we can easily perceive the tendency of the mind of the owner. You may find in one Tom Sayers, Bob Brettle, and the Manchester Chicken; in another, the Primitive Methodist, New Connexion, or Wesleyan Methodist preacher's face; in another, the "Madonna and Child," decidedly after Reubens; in another, numbers of home-made cages, containing every variety of the finch tribe; in another, a trombone, cornet, or violin; and in all but the Skip Jack, you find the emblem of either the Foresters', Oddfellows', or Free Gardeners' Benefit Society. And should you find yourself in a house with nothing to observe but bare walls, disorder, filth, and scanty furniture, you are not to suppose that the owner has no weakness. He has degenerated into vice or crime;—in all probability you are in the cottage, not of the habitual drunkard, but of the gambler or the poacher. But no matter what the failing or weakness of the pitman may be, if he is to enjoy the privilege of living in a colliery village, he must work. He enjoys all the advantages of despotic power and a monarchical Government, and he must not only work, but he must perform that portion of work assigned to him. There is no branch of industry carried on with more system and regularity than coal mining. Officials and men have each their distinct duty clear and unmistakable. They rank much in the following order:—Viewer, under-viewer, overman, back overman, deputy, hewers, off-handed men, putters, drivers, and boys. The viewer is supreme, and the under-viewer sees that his orders are carried into effect. The duties of the overman consist in visiting the workings every morning, receiving the reports from the deputies, making observations on the air currents and general management of the pit. The men work in sets of four to six, and to the overman is sent in an account of all the work done in the pit on the Wednesday before the pay, which is every alternate Friday afternoon. The overman reckons with the men, *i.e.*, he compares the account received of their work with that kept by themselves. The back overman superintends the management of the pit from the time the overman leaves until five o'clock in the evening, when the pit is said to "loose" or stop work. The "caller," who is a man appointed to rouse the men in the morning, reaches his first round at half-past twelve, and knocks at all the doors with D chalked on them. These are the houses of the deputies, who go to work an hour before the hewers, so as to prepare their places. Their work consists of supporting the roof with props of wood, removing props from old workings, changing the air currents when necessary, and clearing away any sudden accumulation of gas or fall of stone that might impede the work of the hewer. The coal in some parts of the pit is softer and more easily wrought than in others; and to prevent quarrelling and partiality, the coal to be hewn is divided into lots, which are drawn once a quarter. This is called kyeveling, and the place or lot assigned to each man is called his kyevel. The hewers are divided into foreshift men and backshift men; the former work from 1 till 9, and the latter from 9 till 5. Each man works one week in the foreshift and one week in the backshift alternately. Every man in the foreshift chalks 1 on his door; this is the sign for the caller to wake him at that hour. When roused by the caller, he gets up and dresses in his pit clothes, consisting of loose jacket, vest, and knickerbockers, all made of thick white flannel, long stockings, strong shoes, and a close-fitting leather cap. He then takes a piece of bread-and-water, or a cup of coffee, but never a full meal—many prefer to go to work fasting—with a tin bottle full of cold water or tea, and a piece of bread, which is called his baite, his Davy lamp, and baccy-box. He says "good bye" to his wife, and speeds off to work. Placing himself in the cage, he is lowered to the bottom of the shaft, when he lights his lamp, and proceeds "in bye" to a place appointed to meet the deputy. The deputy examines each man's lamp, and if found safe returns it locked to the owner. Each man then finding from the deputy that his place is right, proceeds onwards to his kyevel—his picks in one hand and his lamp in the other. He travels thus a distance varying from 1 to 600 yards, the height of the roof being from 3 feet 6 inches to 4 feet. To progress in this space, the feet are kept wide apart, the body is bent at right angles with the hips, the head is held down, and the face is turned forward. Arrived at his place, he undresses, and begins by hewing out about fifteen inches of the lower part of the coal; he thus undermines it, and the process is called "kirving;" the same is done up the sides; this is called "nicking." The process of kirving is conducted as follows:—The hewer sits on a low stool (four inches in height), and grasping his pick with both hands, makes successive horizontal blows. To give the greatest effect to the stroke, his head is thrown back to one side, his left leg extended, and his right bent, right elbow resting on the right thigh enables the leg to augment the force of the arm. Hewing is decidedly the hardest work in the pit. The men are generally perspiring freely by the time they reach their kyevel; and although they work almost in a state of nudity, in a few minutes after they begin to hew the perspiration is running from them in streams. At nine o'clock the backshifts men arrive and begin work, and the foreshift men go home. The pitman never feels hungry while at work, but on coming out he becomes ravenous, and takes food as soon as he enters his cottage. Many of the foreshift men take crowdy, which is a compound of oatmeal, hot water, and butter. Others take coffee or tea, with bread and butter, and some take dinner. The backshift men always take dinner; this usually consists of roast beef or mutton and potatoes, with a boiled suet dumpling or pudding. They eat their pudding first, and beef or mutton after. They take animal food once a day only, and considering the great muscular exertion necessary in hewing, the amount of beef and mutton they eat is very moderate. They seldom or never drink beer at dinner; most smoke a pipe, after which they wash. This washing process is done very effectually. A large wooden tub of hot water is set down before the fire, and the man then sits down on a small stool, with a leg on each side of the tub, and being supplied with a piece of soap, he begins by washing his hands, arms, and chest; head, neck, and face follow, and ends with the lower extremities, the one after the other. This finished, if in the foreshift, he goes to bed, his wife hands him his pipe lighted, and in a few seconds he is fast asleep. The backshift men dress after dinner, and employ themselves as their fancy leads them. Quoits, bowling, and ball-playing are their out-door games; cricket, wrestling, and jumping are seldom practised. A species of pitch-and-toss is their great gambling game. Their house games are whist, draughts, and dominoes. Whatever amusement or subject they take up it is stuck to perseveringly. They are very matter of fact, and have considerable power of concentration. Every available piece of ground near the village is converted into a garden, and almost every cottage has one attached to it. Some keep poultry, and most feed pigs. They cure their own bacon with great success. Their bread is home-made. Two kinds are used by them—white and brown. Spiced wigs prevail on Sundays, and the singing hinny still makes its appearance on grand occasions. Great excesses are still prevalent on the pay Friday and Saturday nights. Ale is the liquor chiefly drunk. But no matter what excesses a man may commit on the pay week, he must be at his post on the Monday following, or run the risk of being turned off, so that the habitual drunkard is certain to lose his employment. In all the author's experience amongst them he has never known a case of dipsomania, nor yet been called on to treat a single case of delirium tremens; this is more than he can say for many other callings. By the rules of their benefit societies, no one is allowed to frequent public-houses while receiving sick money. He is not to be out later than nine o'clock in summer, and seven o'clock in winter, and he cannot leave home without the leave of his Medical attendant. Men who are injured while at work in the pit get a weekly allowance of 5s. from the owners of the colliery. This is called "grant money." We have now to inquire what there is to modify or destroy vital action. Having procured from the Registrar-General a copy of the sanitary statistics relating to Miners—submitted to the International Statistical Congress—in a table contained in that document of the aggregate number of deaths of miners fifteen years and upwards in nineteen districts of England and Wales, during the five years of 1849-53, we find from all causes 7,434 deaths registered. Of these, 81 were occasioned by small-pox, 810 by cholera and diarrhœa, 434 by typhus, 101 by other zymotic diseases, 304 by diseases of the brain, 361 by heart disease and dropsy, 1663 by phthisis, 790 by diseases of the lungs, 260 by diseases of the stomach and liver, 71 by diseases of the kidneys, 37 by diseases of the joints, 1813 by violent deaths, and by other causes 709. From this we observe that violence is the most frequent cause of death. Accidental violence also incapacitates the pitmen from work oftener than any special disease or ailment. Accidents, if not immediately fatal, are not often so ultimately. During the last seven years, 260 men got injured at work, and were under Dr. Wilson's care for periods varying from one week to six months, and although many were cases of a very hopeless nature, all recovered but two, one of which had organic disease, and the other went to work too soon, and partook largely of stimulants. In all those cases, many of which were compound comminuted fractures, there did not occur one single case of pyæmia, that complication which is so common and so fatal in the accident wards of all our large Hospitals. Phthisis stands next as the most prevalent cause of death; phthisis is not a prevalent disease amongst the men of the North of England, and in this district there is absence of the so-called black phthisis, or carbonaceous lung. The author had asked three intelligent pitmen who had worked in Scotch mines if they could account for the prevalence of the disease there. One attributed it to imperfect ventilation, another to the heaviness of the coal dust; the other said it was partly owing to the nature of the dust and partly owing to the oil lamps they wore on their heads. Under the head, Diseases of the Lungs, we have 790 deaths. Attacks of pleuro-pneumonia are not unfrequent, and bronchitis is common. It is rare to find an old pitman who has moved about much from one colliery to another who is not short-winded. Not having had the opportunity of making post-mortem examinations in such cases, he could not say what was the pathological state of the lung; but we can easily conceive that the irritating nature of the gas which often is unavoidably inhaled by them may give rise to spasmodic asthma, and this, with the sudden changes of temperature of the air they breathe, causes the copious secretion of mucus.

This mucus becomes inspissated, and obstructs the small bronchial tubes; the functions of the air vesicles being suspended, they collapse, and the surrounding healthy vesicles dilate, thus constituting the state known as emphysema. In Dr. Wilson's neighbourhood the trees incline toward the east, and he infers from this that the most prevalent winds are west, the rows of cottages should therefore be built running east and west. Those thus placed, and on elevated ground, were observed to be most healthy. The drivers and lads are more exposed to drafts of air, and they do not perspire so freely; they are therefore more liable to rheumatic fever, and its frequent sequence, heart disease and dropsy. The hard work and constrained position of the mine is unsuited for the youth with an enfeebled heart; he does not look sufficiently ill to invite compassion or sympathy; and with the exception of epilepsy, there is no other disease so inimical to the poor young pitman. Heart disease naturally leads us to the other great source of dropsical effusions—disease of the kidneys. There is nothing that a pitman complains of oftener than a pain in the back; it is sometimes so severe as to unfit him for work; it is a species of lumbago, induced by the great strain on the muscles of that part, and in no way connected with the kidneys. There have been a few cases of renal calculi, but not a case of Bright's disease. That the disease is not uncommon in the district may be known from the fact that at this time the author has five patients under treatment for albuminuria, and three of them wives of pitmen; and here again we find the salutary nature of the pitman's work in the mine, and his cleanly habits at home, freeing him from another formidable and fatal disorder. There is no particular tendency to disease of the brain, unless the stooping position may tend to produce apoplexy. 260 deaths occur from diseases of the stomach and liver. Costive and hepatic derangements are by no means uncommon, owing to excesses at the pay, irregularities in diet, and smoking tobacco, but they are not more liable to indisposition from these causes than tradesmen or mechanics. From diseases of the joints we have only 37 deaths out of the 7434, showing that their joints, though hardly dealt with, do not often suffer. The deaths from zymotic diseases are not great, when we deduct 810 arising from cholera and diarrhœa, which prevailed as epidemics during that period. They visit much amongst each other, and a contagious epidemic is apt to spread through the whole village; but owing to the construction of the cottages, and their fires kept constantly burning, the ventilation is good, and consequently the rate of mortality from infectious disorders is not large. But as formerly stated, this table has been constructed from nineteen mining districts. Those districts have been classed into four groups:—1st. Cornish districts; 2nd. Staffordshire districts; 3rd. Northumberland and Durham districts; and 4th. South Wales districts. On examination of those groups, we find the South Wales districts to be the most unhealthy, and the Northumberland and Durham districts the most healthy. To every 100 miners of the aggregate of the four groups of the mining districts, living fifteen years and upwards, the annual deaths are 1·811; in Durham and Northumberland they are 1·312 We further notice from the same table that in the Durham and Northumberland districts, the deaths per cent. of males, exclusive of miners, are 1·855, while in the South Wales districts the numbers are for miners 2·618, and deaths, exclusive of miners, 2·214. Thus, we perceive that the percentage of deaths of miners in the Northumberland and Durham districts is only about one-half that of the South Wales districts. Also, we notice that the percentage of deaths of the Northumberland and Durham districts is less than that of the males of the same district exclusive of miners, whilst the reverse obtains in the South Wales districts, the percentage of deaths of miners there being greater than that of males exclusive of miners. Within the last few days the author had taken from the register of the Easington Union the cause of death of every coal miner, and every coal miner's son, above 10 years of age, who died during the last ten years. The Union has an area of 34,780, and a population of 26,938. Eight large collieries are within it, and the number of coal hewers are considerably above 2000. The deaths from all causes have been 5365. The deaths of coal miners, and men who worked in or about collieries, are 470; of these, 35 were caused by small-pox, cholera, and fever; 33 by diseases of the brain, including apoplexy, paralysis, and tetanus; 60 from diseases of the heart and dropsy; 56 from phthisis (21 of the deaths from phthisis occurred under twenty years, some had not worked underground, and some are registered as screenmen); 41 from diseases of the lungs, including bronchitis, pneumonia, and asthma; 17 from diseases of the stomach and liver; 2 from diseases of the joints; abscess, hæmorrhage, and cancer, 11; 4 from disease of the kidneys; 45 from old age and exhaustion; and from violence (including 1 by suffocation, 2 by burning, 8 by drowning, 2 by feloniously cutting and stabbing), 166. We notice here the large proportion of deaths from accident, the paucity of phthisis, and the number of deaths from old age 13; registered as heart disease, asthma, and bronchitis, were upwards of 70; 2 deaths occurred from joint disease; 1 from Bright's disease; and not one from any specific diseases brought on by excessive drinking. These facts must show that there is nothing in the habits and occupation of the coal miner of this neighbourhood detrimental to his health, but rather that his peculiarities, however unnatural and indecent they may appear to some, tend to his welfare. On going to work, were he to take a full meal, from his position, his digestion would either be entirely suspended or unduly hurried, and if he washed prior to taking food on his return home, this process, which more than anything else maintains his healthy vigour, would be less efficiently done. His stomach might suffer by its own secretion, and his appetite and digestive powers would certainly diminish. Pitmen marry young, and are thus freed from a host of imaginary and real diseases which embitter the existence of thousands more fortunately placed. Dr. Wilson concluded by saying that the moral condition of the miners was improved, a result which he attributed to the spread of Wesleyan Methodism amongst them. The paper was enthusiastically received.

MISCELLANEOUS PAPERS.

In the above record we have given all the principal Medical communications read at the meeting, but we may add that several others were submitted which were of deep interest indirectly to Medical science. In the Chemical Section, Dr. Wood read a most valuable and original paper on Oxidat on by Ozone, in which he showed that ozone, under certain circumstances, is an antiseptic. In the same Section, Mr. Condy read an essay on Disinfectants. To the Geographical Section Professor Busk, conjointly with Mr. Roberts, sent an account of the Opening of a Cyst of the Stone Age near the coast of Moray Frith. The Mathematical Section received a paper from Dr. Moffatt "On the Connexion that exists between Admiral Fitzroy's Caution Telegrams and the Luminosity of Phosphorus." In the Economic Section, Mr. Purdy read an elaborate history of the Mortality in Lancashire, and in the same Section Mr. John Lamb described "The Reduction of the Death-rate in Gateshead by Sanitary Measures." In this last paper the author said that if the average of the last four years be taken, we shall find it 24·3 instead of 25·4, the rate for the six years. This is still far above what it ought to be, for we may safely set down the normal mortality of towns at 17 per 1000, and ought not to be satisfied till this is arrived at; but from the circumstances detailed in the first part of this paper, respecting the narrow streets, blind courts, and defective ventilation and construction of the houses, Gateshead will not for a long time reach this standard. Yet, as new and better houses are built—and they are built very rapidly—and if the authorities persevere in the good work they have commenced, there is every reason to believe a mortality of less than 20 in the 1000 will be attained.

After giving so long an account of the Medical side of the Newcastle meeting, it would be but wearisome to add many comments. The work performed by the members of our Profession speaks amply for itself, and must be judged by the critical reader for what it is worth. It may be claimed for it, however, that it was sufficiently diversified, and it may be added that in its diversity it lost none of its force; it was on a par with all the other work of the Association, and, as emanating from one profession, it may be taken as a sample of intellectual labour, which for variety, learning, and accomplishment, no other profession than that of Medicine could have presented. We congratulate our brethren on their appearance this year in the Parliament of Science.

Accidental Poisoning.—Six children were poisoned at Wolverhampton on Saturday last from eating the berries of the atropa belladonna. One of them is since dead. At Worcester, a girl, aged 9, has died from eating the seeds of the laburnum.

OPENING OF THE LONDON MEDICAL SCHOOLS.

ST. MARY'S HOSPITAL.

Dr. Markham said that the students would excuse him if he left the ordinary path. Instead of reading to them a homily demonstrative of their duties, he should venture to occupy their attention for a short time by saying a few words in reference to a phenomenon which was thought by many estimable members of the Profession to be a deplorable psychological malady, characteristic of the present generation of Medicine—he meant the existing scepticism concerning the effects of remedies over diseases. He would endeavour to show them that there was here, as in other matters of belief, a true and a false scepticism, a reasonable and an unreasonable path, and he hoped he might be able so satisfy them that the scepticism of the times, so far as it was reasonable, was simply the search of honest and inquiring minds, guided by the light of modern discovery, in pursuit of truth. In doing this he should have occasion to refer especially to what, in his opinion, appeared to have been two main obstacles to the advance of their knowledge concerning the effects of remedies over diseases. The first of these was, the unreasonable faith which they had been wont to repose in the effects of many remedies which they employed in the cure of certain diseases, and the second was the unreasonable practice, heretofore so common, and which they still sometimes pursued, of prescribing drugs in those cases in which drugs were not required for the cure. They were often told that they lived in a sceptical age, and if by that term was meant that they lived in an age when men refused to accept without question the dogmata of the past merely because they were consecrated by the dust of antiquity, or had high and honoured names for their authors, he believed there was truth in the assertion. How could it be otherwise? The sciences alike of mind and of matter, in arts and manufactures, political creeds, the very face of the earth had been revolutionised since the birth of the present generation of man. Who of them had not lived long enough to have seen articles of political, social, and every other kind of faith rudely shaken; to have seen opinions long received as settled truths in matters touching the interests of man, modified or subverted? the progress of science had during this century outstripped all calculation. This generation had seen the world march onwards with giant strides on the path of civilisation, such as centuries of its former years of progress had not witnessed. In the advance of science they must look for a solution of this. Science had subjected to her searching analysis the opinions and credulities of mankind. She had made men give an account of the reason of their opinions. She had waged, and was still waging, combat with the ignorance and the prejudices, and the thousand vain images which had so long kept, and still keep, the world from the clear vision of unclouded truth. How, then, should Medicine —an art above all others based on empirical practice, on opinion, on the results of individual belief and experience—escape the questioning of an age in which all opinions were being thus remodelled. Having adverted to the hindrances to the progress of Medicine in past times, the lecturer said he believed that now, for the first time in its history, their art was finding something like a sure foundation to rest upon, and that though the actual advances hitherto made by it towards the position of a science were small, it had entered on the path by which alone it could ever reach that position. Their knowledge of disease and its treatment, though it was limited, was sure. Error was now no necessary associate of Medicine. They could mark where their positive knowledge ended, and calculate nicely the worth of the theories and the worth of the practices which they followed out in the cure of disease. They could estimate the limits of their therapeutical powers. The fermentation which Medicine was now undergoing was a process of purification from the burdens of errors which centuries had gathered round it. This was why it was that their progress, in a positive sense, had been but small, why they had as yet made but small advances towards a knowledge of the essential nature of diseases, and of that kind of treatment of them which might be called specific. The lecturer expressed his opinion that the source of the deepest errors which attached, or had attached themselves to Medicine was to be found in the trust which they were wont to repose in what was called experience—that infallible oracle from whose dictum there was often no escape. He next pointed out what he thought might be considered as the proper and only test by which they could determine what was a therapeutical fact, founded on experience, and then considered how far their daily practice was founded on, or was in accordance with, such rational experience. He believed that a therapeutical fact, to be worthy of the title, should have the following definition:—It should be the result of very numerous observations, made by fitting and capable inquirers, who, after due investigation, had arrived each at a like conclusion, the conclusion not being contradicted by the observations of other equally capable observers. Every practical deduction in therapeutics which would not bear this test seemed to him not to deserve the title of rational, in so far, at least, as it was accepted and acted upon as a positive fact. In the course of some excellent practical advice to the students, Dr. Markham observed that Medicine was a stern and rugged business. Whoever tied himself to it as to the business of his life must not expect to float calmly down the stream; he must be prepared for struggles, and ready to encounter hardships, and to meet with grievous disappointments. There was no profession, he believed, which brought more trials to the conscientious man, for there was none in which a want of conscience and of honesty was so frequently rewarded with what the world called great success. The judges and arbiters of a professional man's skill and success were the public, who, he need hardly say, were utterly incompetent so to act. If he alluded to this dark side of Medicine it was because he would earnestly beg them now to steel their minds to an unswerving adherence to honest duty, which taught them so to study as to become men of science. The greatest safeguard which they could have against the contagious influence of the vile quackeries and practices which beset their Profession both from within and from without was a well-grounded scientific knowledge of their art. It was a consoling fact that men of science did not practise quackery in Medicine. The most successful of the quackeries of the day—he meant homœopathy—was a striking illustration of this fact. Men made much money at the business, but positively he did not know nor did he ever hear of a homœopathist who possessed a name known in the world of science. It was an instructive fact that of the grand makers of impossible cures—of the successful workers upon human credulity—there was not one who had done a single deed or made a single discovery tending to the progress of Medical knowledge, or had left behind him a name honoured by any one whose name was of price. We see the names of Harvey and of Jenner, and of a host of such like worthies inscribed on the edifice of Medicine. We mark that at all times men of our liberal Profession have disputed and distinguished themselves in the different fields of science. Our Profession has produced illustrations in chemistry, in botany, geology, mathematics, theology, in every branch of human learning and study; but we look in vain for one single example in this way which might serve to throw some slight relief over the dark shadow and disgrace of quackeries.

The lecturer therefore urged upon his hearers to be scientific, honest, and conscientious students now, and they could not fail to be honourable Practitioners hereafter. As men of science, they could never honestly fall into the deceits of charlatanry. Above all, let them never let their moral sense grow dumb. The voice of self-interest might well tempt them in many a form. They might have to choose between the rugged and hard path of an ill-requited but honest labour, and the easy and luxurious road which led to wealth and a certain popular repute, and perchance to Professional dishonour.

Dr. Markham concluded with the following words:—Get ready therefore for the battle of an honest life by doing your work honestly here. If, indeed, I were asked how you might best act now so as to ensure welfare in after life—not welfare in its restricted and ignoble, but in its perfect sense—I should reply:—Keep the law of duty now ever before you; let it be your never-failing pillar of light; study conscientiously, religiously—as the Frenchman forcibly has it—and when you have gained this conscientious, this religious knowledge of your Profession, and have, as members of society, to bring it into practice, use it ever conscientiously. Be, at all events, brave and on the square with your conscience to the last. Your success in life may not equal your hopes or your deserts; it is not in man to ensure success. The best and wisest of us may fail in the struggle; but we may have our consolation even then. To gain the world's applause, and snatch its fleeting spoils is not man's sole and proper business here. Immortality smiles forth on the scene, and beckons him ever onwards in the race for those eternal honours which the world can neither give nor take away—the prize which all may strive for, and no one strive in vain. And so it is, gentlemen, so long as you steadily obey the dictates of that inward monitor, you may, like the ancient knight of chivalry, if all be lost in the battle, still proudly boast that nothing is lost — honour and conscience being to the last without reproach.

ST. THOMAS'S HOSPITAL.

The Introductory Address was delivered by Mr. Sydney Jones, Lecturer on Anatomy and Assistant-Surgeon. He first referred to the interest excited by the 1st of October in the minds of present and past students as well as of others present not connected with the Profession. Addressing these, he said: A period may have occurred when the life of some husband, wife, parent, or child has trembled in the balance: how eagerly have you then sought the opinion of your adviser! with what attention have you listened to the opinion expressed! with what diligence have you followed out every one of his instructions! how you have watched and hung upon every look and gesture! buoyed up and redoubling your exertions when his countenance was expressive of hope, your spirits and energies damped when his anxious expression indicated the severity and hopelessness of the case. Your interest in the Profession must at some time have been excited. We hope that you will ever retain a lively recollection of any benefits conferred, and that you will ever take interest in the realities, not the quackeries of our Profession; we are glad to see by your presence here to-day that your interest has not flagged, that you are willing to join with us in giving a welcome to those who are about to make this for some time to come their future home.

He was desirous of limiting his remarks principally to students, so as to tell the entering student of the glories of our Profession, to remind him of its shoals, and give him some words of advice as to the course he is to pursue during his Hospital and subsequent Professional career; so that standing upon the threshold of his Profession he may not be without some landmarks to steer by, without such directions as will enable him to perform his duties to the satisfaction of his teachers, with credit to himself, and honour to the Profession in which he has embarked.

Although the Medical Profession had no great inducements to enter it, except for its own sake, we cannot but hope that it is only now rising into that position which it is eventually to occupy;—that so soon as a higher standard of education is generally established amongst us; that so soon as those entering our Profession are required to be better educated in preliminary studies and the collateral sciences; that so soon as this better education has brought amongst us men of high character and noble feelings; that so soon as bickerings and petty jealousies cease, and peace and union reign amongst us,—then will the Profession occupy a still more exalted position in society than it does.

With regard to looking upon the Profession as a road to wealth, he said,—It is not to such men and to such sordid motives that our truly glorious Profession is indebted for its progress. If you wish to make a business of our Profession, you had better go elsewhere, where your views may be carried out more profitably. But do not be so mean as to come and take your share in, and make a stock-in-trade of, our good name, which was gained by benevolence and genius, was not secured, and certainly cannot be enhanced by principles such as yours.

He pointed out the importance of having a good groundwork in preliminary studies in keeping up that knowledge. Those of you who hitherto have not had the opportunities of acquiring such knowledge, would do well to avail yourselves of every spare moment for studying such matters as will not only help you in the studies of your Profession, but will afford you material aid in your powers of application. You have certainly, during your term of Hospital pupilage, much to get through, but you do not know of what immense powers you are possessed; by perseverance and hard work there are very few things which you will be unable to accomplish, and by method you will find no difficulty in devoting a short time daily to such pursuits. You know not amongst whom you may be thrown; you will have to treat the rich as well as the poor, the learned as well as the ignorant, and these exercises will do much toward making you what is absolutely essential for you to be—perfect and accomplished gentlemen. I can readily imagine some of you thinking that to diverge from some of your abstruse studies to a problem in Euclid, an ode of Horace, the odyssy of Homer, or some other standard literary work requiring thought and suggesting reflection, is not likely to afford much ease or recreation to your minds; but by such divergence you are not only relieved from the monotony of the subject upon which you have been engaged, and will be able to recur to its study with greater zeal and greater prospect of success, but you will be more profitably and more safely engaged than if you were to have recourse to some of those works of fiction which tend to inflame the passions and enslave the mind, so as to make the latter lose its taste for, and ultimately deviate from, the primary object which it had in view.

He then passed over in review their subjects of study. With regard to note-taking, he said:—I have known some students, having been made acquainted with the predilection which some men have for their own opinions, copy *verbatim* the whole of a teacher's Lecture, and make this manuscript their sole text-book on a certain subject; for the purpose of getting up materials which will prove of service to them in their subsequent periodical examinations, forgetting that their object is not merely for the time being, but the ascertainment of general truth. Such students have literally crammed themselves with their notes, which have undergone no further development, but are returned to the teacher still crude and undigested. They are acting in the same manner "as if sheep, after they have been feeding, should present their shepherd with the very grass itself, which they have cropped and swallowed to show how much they have eaten, instead of converting it into wool and milk."

With regard to dissection. The mode in which a student carries on his dissection has often seemed to me a very good test of his general powers of application, and of his capability to adapt himself to the drudgery of his Profession. We occasionally see some students about to enter on a dissection somewhat repugnant to their feelings—digestive, olfactory, or tactile—protect their hands by gloves, or evidencing some other form of squeamishness, or anxious at all events that they should be relieved of work so distasteful to themselves. And not unfrequently do we see others, readily detected however, ready to gain anatomical knowledge, but with the slightest labour to themselves; they ask for demonstrations when such are not necessary, when it is only their own idleness which prevents them finding everything that is wanted; it involves less trouble to have these things done for them than to read and subsequently seek for themselves. Gentlemen, that is not the way to acquire your knowledge of anatomy; your squeamishness and lukewarmness must cease, for with such principles no man ever yet became an anatomist.

Treating of the subject of physiology, he congratulated the Profession on the advances which had been made in rescuing many of the actions which occur in the human body from the stigma of what is called vital principle, and in referring these rather to the influence of physical and chemical forces; for this term vitality or vital principle has been subjected to much abuse, and has long been the bugbear of our science, serving as an excuse for idleness and as a cloak for ignorance, and tending to arrest or retard our scientific progress, and the formation of general laws.

A diligent attendance in the post-mortem room was insisted on; and, in connection with this subject, Mr. Sydney Jones said:—It is a source of great regret to most of us that these examinations are frequently denied when we are anxious to verify our diagnosis, or clear up some point of doubt; and unfortunately these refusals not unfrequently occur in connection with cases which have absorbed the largest amount of interest. It would be very desirable for all our large metropolitan hospitals to unite, and let it be generally understood that the law of post-mortems was one not to be deviated from. Surely the recipients of Hospital relief ought not to be opposed to the carrying out of what might be made the means of securing benefits for future generations of their fellow-creatures, especially when by such process no hurt nor indignity is involved.

You will find a difficulty in practice in drawing a line of separation between Medicine and Surgery; nor will you derive much help on this point by reference to the practice of individual Physicians or Surgeons, for I am acquainted with some Surgeons who look upon all paying patients as Surgical, and upon those who do not pay as Medical; but I am equally well acquainted with some Physicians who hold principles exactly the converse. It is the same with these two subjects as with other things in Nature, as with the animal series, and the whole class of diseases; there are typical forms, but at the same time there are connecting links, to which it is difficult or impossible to assign their proper place. He laid great stress upon the patient, continuous, and honest observation of the natural history of disease. You are not to expect that typical forms of disease, such as are described in books, will be always presented to you. You will find diseases running one into the other. With skin diseases you will find this especially evident. Lepra will run into psoriasis, eczema into impetigo, and so forth. You will find typical cases of cancer and its varieties; but these varieties will run one into the other, and there is good reason to suppose not only that there are various degrees of cancer, but that there is a regular gradation between cancerous and innocent growths. You will find typical cases of what is called pyæmia; acute cases marked by symptoms well delineated in your text-book; but there seems good reason for classing under the same head such joint affections as follow after puerperal fever, the exanthemata, and certain purulent discharges, as well as those chronic abscesses, or phlebitic inflammations which occasionally occur after certain operations. And it is in my mind doubtful whether those well-defined and absolute laws which are laid down with regard to a specific disease are correct, and do not need modification by a repetition of observations carried on without any delusive mental tendencies.

He described a few cases to show why the interest of governors should be excited in charitable institutions, and concluded as follows:—

And now, gentlemen, let me urge upon you the importance of entering your profession not only with a determination to work and make the fullest use of whatever talents you possess, but with a full desire to practise it with uprightness and with strict regard for the highest moral principle. A character for morality and good principle is not only of incalculable value to you as gentlemen, but is of primary and essential importance to you as Medical men. You who are now about to leave your homes for the first time, let loose upon London life, left to your own resources without parent, or, it may be, friend to guide you, will necessarily be exposed to many temptations, and will have to seek for more than human assistance to deliver you from evil. Be especially upon your guard against listening to the first allurements of folly and vice; prepare yourselves to be proof against these at the first onset, for you will find this a very much more easy task than to have subsequently to eradicate bad habits which have become firmly rooted. It is possible that if in your walk through life you meet with success, there will be some to whom you will become an object of envy, not merely concealed, but it may be openly expressed. Now, if you are wise, you will take no more notice of this than the moon has done, during the last few nights, of the howling of the dogs. You will say nothing but shine on.

There are two points to which I must very briefly allude before concluding—the first is the much mooted question of vivisection, to which I refer only to express the indignation which must be felt in the mind of every Englishman at the atrocious cruelties which have been perpetrated in some of the veterinary colleges on the Continent. Although it is not necessary for us to use the same consideration as the Turk, who thinks it a sin to kill a dog, has Hospitals for superannuated cats, and does not venture to destroy even his vermin, but puts them tenderly on the ground to be received into the clothes of the next passer-by; yet all well-directed minds must recoil from inflicting any unnecessary cruelty. Surely it is not necessary, in order for students to become adept operators, that these operations should be performed on living animals, nor does it seem justifiable that experiments should be carried on simply for the purposes of demonstration, of impressing more vividly upon the mind certain physiological truths. But altogether to discountenance vivisection is quite out of the question; for it has already done much, and promises to do more, towards the alleviations of the sufferings of mankind and the elucidation of some of the mysteries of our science.

There is another point upon which all those who take interest in the well-being of St. Thomas's have to congratulate themselves, and that is the selection of a site for our future Hospital. For notwithstanding the factious opposition which has been raised, the Stangate site will, there can be no doubt, be eventually determined on. It is much to be regretted that such opposition has occurred; but it has been got up without any good foundation to support it. All the arguments which have been adduced in opposition to this site are either not founded on fact, or are so weak as to require but little ability to refute them. The promoters of the opposition, seeing the weakness of their points, have sought to strengthen them by attributing unworthy motives to the Governors and members of the Medical staff; but this charge is paltry, and has been treated with the same merited silence as the unfounded assertions adduced against the salubrity of Stangate. During the past year the funds of the Institution, although necessarily not made so available as might have been the case had we retained our old site, have nevertheless, so far as circumstances have permitted, been well applied. To the Treasurer and Governors great credit is due for having made much of what must be at most only a temporary Hospital, but which can never yield, either to the public or to the Medical Profession those advantages which its means are qualified and bound to afford. Having had much to do with the out-patients of this and of the old Hospital, I can state what can be borne out by my colleagues in this department. The out-patients relieved here may altogether equal in number those relieved at the old Hospital. But taking the male applicants, there is a sad deficiency in number and quality of cases: the cases for treatment are, as a rule, not urgent ones; a large proportion consists of the refuse of other Hospitals, and would in our old Hospital have been treated without letters in the casualty department. And as to the female applicants, who are more numerous, a large proportion is made up of the better classes, and not the poor, for whom the Hospital is intended. Stangate occupies a position corresponding pretty accurately with that which we have lost, and presents advantages not afforded by any other site which has been discussed. Our Hospital should be in a densely-populated neighbourhood, of ready access to the masses, in proximity to factories and accident-making districts, and readily approachable by leading thoroughfares. The few nuisances enumerated as at present existing near our proposed site are remediable ones:—the gas works have a limited term of existence; nuisances from factories we are furnished with full powers to abate; and we ought reasonably to expect, from the immense amount of treasure now being expended on the drainage of London, that the river will be comparatively pure. I consider that at Stangate we ought to have a Hospital that will rival in appearance and appliances any Hospital not only in London but in Europe, and that the opportunities of supplying the needs of the poor will be immense, perhaps not to be equalled, and certainly not to be surpassed, in any other district of London. These opportunities will be available not only to a large portion of the poor of Southwark, but to the densely-populated districts of Lambeth, and to the western half of south London generally.

And now, ladies and gentlemen, I thank you most heartily for the forbearance you have extended to me, but, in conclusion, wish to say just one word more to the students of this Hospital. Endeavour, gentlemen, so to live as to be enabled, when old age has crept upon you, to recur with satisfaction to the events of your past lives, and enjoy the pleasing reflection that, in all your doings, your object has been to walk in the path of duty; so that, when your term of sojourn here is about to cease, you may look forward to another more lasting inheritance, to one that is eternal, and that fadeth not away.

UNIVERSITY COLLEGE.

The Introductory Lecture was delivered by J. Russell Reynolds, M.D., F.R.C.P., Special Professor of Clinical Medicine in University College, and Physician to University College Hospital.

Gentlemen,—The office of "Special Professor of Clinical Medicine," which it is my honour to hold in University College, has furnished me with opportunities for the study not only of patients, but of students; and I purpose to-day to present you with some of the results of those clinical observations which I have made upon the latter.

The term "clinical lecture" is often applied to a discourse delivered elsewhere than at the bedside of a patient. In like manner a familiar phrase is often used to denote a species of exhortation, or, it may be, rebuke, administered at other times than in the hush of night, and under circumstances of less privacy than the "curtain" might secure. If, then, I denominate the remarks I am about to make "a Clinical Lecture upon Students," common professional usage of words will be on my side if strict etymology is not; for those remarks, although delivered in the theatre, are founded, for the most part, upon observations conducted in the wards; and if anything I may say should seem to have the tone of exhortation or rebuke, I wish you to think that such message comes to you from the other side of the curtain, where lies the patient, not any individual patient, but the great suffering world, which is at once our study and our care. It is towards clinical work that all Medical study tends; it is at the bedside of the patient that our science culminates, and becomes an art. The "case" with which we come in contact is, as it were, the medium through which correlated forces become exchanged; or to alter the figure, the "reflective centre" in which all the "knowledge" we have laboriously gathered from without becomes converted into "power" for the patient's good. It is well, therefore, to keep this end in view, and to regard all our studies in this their high relation. The bedside of the patient is the point from which to value correctly all scientific medicine, and it is from this stand-point that I would address you now; and in delivering a clinical lecture upon students, I shall not depart from the plan I usually adopt, but shall commence by giving you a picture of the cases that I wish to bring before you. They are five in number. After having described them, I shall advance to a consideration of their pathology, but first let me sketch these cases, as you may have seen them, and may again see them in our wards.

The cases described were five in number—the first that of a fast young man, who neglected lectures, and paid no attention to Hospital study; who sauntered lazily about, wasting, and not using, time and opportunities. The second that of a busy student, always in a hurry, trying to do too much at once, and gaining, in spite of diligence, only a confused notion of his Profession. The third that of a man with but one idea, to which he bent everything, and for the pursuit of which he neglected equally important studies. The fourth and fifth, who were brothers, agreed in working well, but differed in that one was always trying to make facts fit books, while the other as constantly endeavoured to show that books were wrong.

After minutely describing these cases, the Professor advanced to a consideration of their pathology, showing that the main fault in each was the absence of some element essential to successful study. Thus, in the first there was want of intelligence, an imperfect recognition of the magnitude of the work undertaken, a want of honesty in not improving the opportunities placed at his disposal, and a want of heart in not treating with respect and kindness the sufferers that presented materials for his study. The second failed to see the existence of a deep inner relation between all the facts he studied, and thus gathered together a multitude of broken sticks of learning, which he had no means of binding together into bundles for daily use. The third, though a diligent student, and correct in many of his thoughts and plans, failed in his non-perception of the greatness and many-sidedness of Nature's works, and of the littleness and imperfection of our means for knowing them, so that he lost sight of the great fact that Truth must be approached from diverse points, and that nothing, however isolated it may appear, must be neglected in the study of so complicated a science as that of Medicine. The fourth and fifth agreed in exhibiting honest and earnest work, but differed in that the one was constantly endeavouring to trace out "order" in the facts that came before him; the other to find, in the same facts, "progress." Both, it was urged, were present in Nature, and must be combined in science. In illustration of this principle, Dr. Reynolds continued, "Look at individual life, and see that some great processes go on in the same way from hour to hour, from year to year; there is the alternate diastole and systole of heart; the constant play of inspiration and expiration, with their effects on air, and blood, and tissue; there is the daily change from sleep to waking, from activity to rest; there is the daily disintegration of tissue, the excretion of waste material, and also the daily assumption and assimilation of fresh supplies. Further, there are recurrences, with wondrous order, of some physical changes, partly those of health, partly those of disease, at still longer, but yet time-ordered periods, and the seasons of this year have effects like to those of the years that have gone before. But with all this order, and as the result of this order, there is progress: the infant grows into the child, the child into the youth, the youth into the man. The changes of dentition and of puberty lead onwards to the full growth of the adult; and then, in its due time, decay comes surely on. Some diseases may appear, go through their well-known phases, observe periods that we can with certainty predict, but they have not been in that individual before, and they will not visit him again,—they have done their work. All that he has passed through makes him what he now is; there has been recurrence and order, but also growth, that does not return into itself. Yet look further, and see that this growth has its order also; lose the individual in the many, and then see that those things which occur in him but once, which even constitute his separate life, do recur, but recur in others, and so again we see the circle, but a wider one. But is there no progress of this larger group? Look at families, at races, at nations, and you may see that they, too, have their periods of infancy, of youthful follies, of angry passions, of wise discretion, of luxurious ease, of creeping feebleness, and dusty death; and while the one nation with its one life sinks away, another takes its place, and the great world is ever young. But the great world also grows, and,

> I doubt not, through the ages one increasing purpose runs,
> And the thoughts of men are widened by the process of the suns.

Look at the sciences from another point of view. See how in that of physiology, in its largest aspects, we observe an onward progress amidst the orderly recurrence of events. Not merely individuals but species become extinct; new species take their empty places, and lower give way to higher forms of life. Whatever may be the theory for its explanation, there can be no doubt about the fact that the life upon the world at this present moment has not the form it had; seeming uniformity of process has wrought out change, and that change is one of progress or advance. We do not exhaust the question of how this is, we only move it a few steps further backwards, if we admit the principle as readily as we see the facts of so-called "natural selection." Go back to the simpler types of life; imagine, if you will, that all the variety that now clothes the world has sprung from one common form, you must then admit that there was in it the possibility of divergence from the type; or, in other words, that it contained within itself the germ of all subsequent developments; and thus, in the only conception we can frame of primeval life, we see in its apparently simpler, but really more complex order, the mainspring of advance. It is easy enough to trace life backwards, until we fail to see the differences that lie hidden in some fœtal form, common to all kinds of fowl, to the donkey and the dog, to the monkey and the man. But do not let us suppose that differences though hidden do not exist. We may not be able to distinguish the one ovum from the other, and yet the difference between them is so great, that one becomes the peacock and the other the Cochin China hen; the one a Skye terrier, and the other a learned doctor of the law. It is when brought face to face with facts like these that human science, grateful for what it is, should not trumpet forth generalisations to which it has leaped to conceal its weakness, but should show its real strength in humbling itself before great truths that are as yet past our finding out.

Again, in the yet infant science of geology we may observe the same combination. We argue upon the supposition that the processes of past times were like those of to-day, we believe in the constancy of the operation of Nature's laws, but yet the result of all this is that the world's face has changed, and is changing still; that while the earth lasts, although heat and cold, summer and winter never fail, they never fail to do their work, and that that work does not, so far as we can see, return into itself, but carries out some mighty plan, the mere alphabet of which we have as yet been able to learn. Notice once more how both order and progress may be seen combined in the history of scientific systems and of philosophic method. Their movement is onward, but it often appears to return into itself, yet it does not thus return. It is not a circle that is described, but rather, as has been said, a widening and ascending spiral, whose ultimate course we cannot now compute.

Lastly, see how in human life the one kind of law, by its constant and orderly operation, developes results of another and a higher kind. See how the physical forces are often determined in the direction of their action by the chemical constitution of the bodies in which they are displayed; how chemical actions are co-ordinated to produce results which cannot be expressed by chemistry alone, but require another set of terms, which we denominate the vital; how animal life is determined by mental conditions; how the latter often yield to social and moral obligations; and how marvellously they are all intertwined to produce that complex creation—a living man.

How long the apparent conflict of these two elements will last in science we cannot tell; where is their common point we cannot see; as the circles of order widen, they lose their apparent recurrence, and order and progress become, even in our own minds, one. The infinite circle is the straight line infinitely produced Our definitions fail, or contradict themselves when we endeavour to carry them thus far, but we feel confident that there is no contradiction in the things themselves, and our finite minds can feel assured of the existence of some great facts that they have as yet failed to grasp, and may be convinced of the reality of an infinite, abiding, and eternal truth, in which all truths shall centre—in which is no error, no darkness at all; but which can now be only dimly seen or felt after, amid the changing and passing shadows of Time. In entering our Profession, then, you must take high views of its vast demands as a science, and of its claims not only upon your mental, but upon your moral nature. Avoiding carefully the errors I first described, see to it that you have untiring industry, but that your work is deep as well as broad; strive to learn the inner, often hidden, relations of all branches of your knowledge, but remember that much is yet hidden, and that therefore you must approach Truth from many sides; and lastly, in your earnest work to know the laws of life, and in your hereafter daily contact with life, at its beginning, in its troubles, and at its close, do not, in recognising the divinely-appointed order of all events, lose sight of that great divine plan of progress which will surely evolve the highest good out of much that now seems deepest evil. You will thus often see a moral purpose in the suffering you try, but try vainly to assuage; a good in the death you feebly struggle to postpone. Regarding disease as fraught with meaning and purpose other and higher than the mere change of organ you can see and handle, and record in your pathological notebook; looking on death as the fulfilling of some greater end than can be represented in the Registrar-General's "Return;" though often saddened, often baffled in your unequal conflict with those two great foes, you may see that they also have a work to do, perhaps more friendly than your own; and thus you will be led to feel, and that with a conviction no other profession could urge so strongly upon you, that though

Suffering is permanent, obscure, and dark,
And has the nature of infinity,
Yet through that darkness (infinite though it seem,
And irremovable) gracious openings lie,
By which the soul,—with patient steps of thought,
Now toiling, wafted now on wings of prayer.—
May pass in hope; and though from mortal bonds
Yet undelivered, rise with sure ascent
Even to the fountain-head of peace divine.

WESTMINSTER HOSPITAL.

The Introductory Lecture at the Westminster Hospital was delivered by Mr. Christopher Heath, F.R.C.S., Lecturer on Anatomy, and Assistant-Surgeon to the Hospital.

Mr. **Heath** said that his Lecture was addressed emphatically to students, and not to his colleagues or the Medical friends he was glad to see around him, because he felt that from his long connexion with students he might venture to offer a few words of advice which might be useful to them. Few men, he thought, entered at a Medical school without some previous experience, in the form of apprenticeship, which he believed to be fraught with much benefit when pursued under the tutelage of an able Practitioner, but at the same time considered that preliminary general study was essential for a Medical student, and therefore congratulated new students on having passed a preliminary general examination. Those who had already seen a considerable amount of Medical practice were warned, moreover, not to neglect their practical studies, since different methods of treatment might be witnessed at an Hospital and on different classes of patients from those they were previously acquainted with. The Lecturer maintained that the student could not keep too constantly in mind that the object of all his studies was to fit him to become a Practitioner, and therefore that though it was essential that the student should pass certain examinations in order to obtain his diploma, he should rather strive to cultivate a knowledge of the symptoms and treatment of disease, combined with tact and common sense. It must be allowed that individuals differed in capacity, but there was nothing in Medical studies so difficult that ordinary ability, combined with diligence, could not overcome. Real genius was a rare and perhaps dangerous possession, if its possessor was led to believe that he could dispense with hard work, and, as Buffon said, "Invention depends on patience."

Mr. Heath, in alluding to the subjects of study of the first year's man, took occasion to make some remarks respecting anatomical study as pursued in the present day and believed that though Medical men might venture nowadays to accept many statements without actually proving them themselves, yet that the occurrences of everyday Medical life necessitated an acquaintance with Surgical anatomy. He thought that anatomists were to blame for having overloaded their science with minutiæ, for having separated into distinct systems the parts composing the one perfect body, and for having kept asunder far too widely surgical and anatomical relations. The student was reminded that the creature he would have to treat in disease would be a man, whom he would not be able to dissect literally to find out the malady, but would have as it were to pierce the tissues with his mental eye, and discover the secret mischief by his cultivated senses. External form and general physiognomy, both in health and disease, were also urged upon the student's attention, and the necessity for the operating surgeon's being a thorough anatomist was illustrated by reference to the examples of Astley Cooper, Liston, and Fergusson. The lecturer earnestly deprecated the tendency to avoid responsibility, which he believed to be prevalent, and thought that the "official fear of incurring responsibility," as Kinglake termed it, had invaded not only the army and navy, but to some extent the Medical Profession also. A proper feeling of responsibility regarding the life and death of patients, etc., was to be looked for in every Medical man, and every one must feel it deeply at first; but the young practitioner was exhorted not to be overwhelmed when the results of treatment proved unfortunate. "But," continued the lecturer, "if thoughts like those I have alluded to are apt to arise in the treatment of ordinary cases, what must be the feeling of the Surgeon when about to commence a complicated and serious operation! Much to be pitied, indeed, is the man upon whose shoulders this great weight of responsibility lies, if he feel himself unworthy of it, or if his mind revert to opportunities neglected, or instruction despised; and therefore it is that I so strongly urge upon you the necessity for thorough acquaintance with anatomy, and for constant attendance in the wards of the operating theatre. And yet the most accomplished anatomist, the most skilful surgeon, cannot command success, a Higher Power than that of human hands alone can govern all results, and we must be content to bow before Him."

With regard to lectures and Hospital practice, Mr. Heath said that he did not ask the student, as was often absurdly done, to "live in the wards," because he knew that their time would be fully taken up with lectures, etc., except for two hours in the middle of the day, which hours should be devoted regularly to the wards or the out-patients' rooms of the Hospital. Nothing was a better stimulus to the energies of Medical officers in the care of their patients than the presence of students, and he therefore believed it to be the very best policy of governors of Hospitals to foster the Medical schools attached to them. The offices of Clinical Clerk and Surgical Dressers were pressed upon the student's notice, as giving the best opportunities for acquaintance with practice, and allusion was made to the new regulatons of the College of Surgeons requiring certificates of such appointments. Attendance upon post-mortem examinations was also shown to be requisite, since any Practitioner might be called upon to decide as to the cause of a sudden death, and his evidence might involve the lives and liberty of his fellow-subjects. Mr. Heath then proceeded to speak of the rewards which were open to the student during his studies, and said that class prizes had always a tendency to induce the pursuit of one branch of study to the exclusion of others, and cautioned his hearers against this error, whilst exhorting them to compete for the numerous prizes offered them. He alluded also to the valuable prizes founded by Mrs. Chadwick, the conditions of which guarded against the error he had mentioned, since they were awarded for general proficiency. The most valuable prizes offered to the students of the Westminster Hospital, however, were the offices of House-Physician, House-Surgeon, and Assistant House-Surgeon, which were thrown open to all without fee, and the lecturer spoke in the warmest terms of his recollections of the tenure of similar offices by himself.

Mr. Heath next proceeded to address individually the three great classes of Medical students,—"To the student who is soon about to enter upon practice I would say, do not imagine that you have completed your studies because your three or four years here have expired; ripe experience is necessary for your perfection, therefore observe diligently, record carefully, study constantly—study not merely books, but men; and not merely men in disease, but men in health and in their social relations, that you may be prepared to take that high position which, as successful practitioners of a noble art, you will be justly entitled to." The second year's man was urged to concentrate his energies on the business of his education, to make up for all past deficiencies, and to study to gain knowledge, and not merely to pass examinations, whilst the freshman was warned not to let his inexperience lead him into difficulties. He was told not to imagine that the first year could be wasted with impunity, since each year had its allotted amount of study. Relaxation from study was shown to be occasionally necessary for the most diligent, but care in the choice of companions and amusements was inculcated. Amusements, if used rightly, rendered the student more capable of subsequent work, but not if they were allowed to interfere with necessary rest or the labours of the following day, whilst the choice of them must depend on each individual's gentlemanly tastes. Whilst disclaiming any wish to sermonise, Mr. Heath protested against the notion that it was necessary for a young man to "sow his wild oats," and in support of his views quoted a passage from Mr. T. Hughes's "Tom Brown at Oxford," and concluded his lecture as follows:—

"And now, gentlemen, in conclusion, let me beg of you all to be in good heart as regards your studies and your future career. We all, I suppose, at one time or another feel inclined to despond and look at the black side of things; but depend upon it he who does so least is at once the happiest and most successful man. If the student allow himself to become despondent in his early studies, how will he ever overcome the still greater obstacles which await him? If the more advanced student shirks his first examination, how will he ever become a Practitioner? But it is as Practitioners, perhaps, that this 'equal mind' will be most necessary for you, since it may affect not merely your own but your patient's welfare. The man who is over-anxious unnerves himself in some degree, and is thus less fitted to take that calm view of his own affairs, and those of others which will be most conducive to a good result, and therefore I say again be of good heart, not forgetting, however, to put your trust in Him who 'ruleth all things.'"

After the lecture the Board-room of the Hospital was thrown open for a *conversazione*, where a large display of microscopes, instruments, and scientific appliances was prepared for the entertainment of the numerous visitors. Amongst other interesting exhibitions, Dr. Gibb demonstrated the use of the laryngoscope, Dr. Radcliffe exhibited some most interesting electrical experiments, and Mr. Brooke explained experimentally the telegraphic apparatus communicating between the Hospital and his residence. Tea and coffee were served to the company, which did not separate till a late hour.

THE ARMY MEDICAL SCHOOL AT NETLEY.

The Introductory Lecture of the Winter Session of the Army Medical School was delivered on the 1st inst. in the theatre of the Royal Victoria Hospital, Netley, by Professor Maclean, M.D., Deputy Inspector-General, before a large audience, consisting of members of the Medical Profession, both civil and military, and some of the neighbouring gentry. Among the visitors were the Earl of Hardwicke, F.R.S., Sir Ranald Martin, C.B., Sir James Clark, Inspector-General Dr. Deas, R.N., Principal of Haslar Hospital, Deputy-Inspector General Dr. Mapleton, Head of the Medical Branch of the Army Medical Staff, the leading Physicians and Surgeons of Southampton, Colonel Wilbraham, C.B., commanding the garrison, and the Military Staff of Netley, officers of the Medical Staff from Portsmouth, and others. Thirty-three gentlemen, candidates for commissions as Assistant-Surgeons, had arrived on the previous day for the purpose of going through the courses of instruction at the School.

The Professor, in his opening remarks, called attention to the progress which had been made in the school buildings, museums, and all the minor arrangements for the sessional work, since the Introductory Lecture and opening of the establishment at Netley, in April last. He then adverted to the comments expressive of surprise which were still occasionally put forth at the Army Medical School being removed so far from the metropolis, explained the causes which had led to the seletion of Netley for its place of habitation, and congratulated the Medical officers of the army on the circumstance that their head-quarters—having been prevented by the reasons he had named from being placed in or near London—should have fortunately found a position near a large town so conspicuous as Southampton is for the remarkable unity and genial feeling prevailing among the members of the Medical Profession resident there and in its vicinity. Not only were the Medical gentlemen of Southampton widely known for their good fellowship, but, as a body, they were distinguished by their long-established Medical societies, and the zeal with which they had pursued the science as well as the business of their Profession. He looked forward to friendly relations of the most intimate kind gradually growing up between the civil Medical staff of Southampton and their military brethren who had lately settled in their neighbourhood.

The lecturer next stated that before entering upon the subject to which he intended particularly to invite their attention, viz., the facts which had been developed by the laborious investigations and exhaustive report of the Royal Sanitary Commissioners for India, he wished briefly to advert to a few matters of general interest. The last time he had had occasion to address an audience in his present capacity, he had congratulated them on the near prospect of the amalgamation of the Queen's Indian and Queen's General Medical Departments. He had then anticipated the whole body of the Medical officers of the army, at home and abroad, working together harmoniously for the common good, under one head, with a termination for ever of the jealousies which had so long been engendered between the two classes of Medical officers in India, by divided interests, different rates of pay, and different regulations. He could not then foresee any difficulty which might not be overcome satisfactorily in attaining this end. It is now known that the attempts at effecting the amalgamation have failed, and, without entering into a consideration of the obstacles under which the failure has taken place, he could not, as well from his long acquaintance with India, as from his earnest wishes for the best interests of the Medical officers of all classes, help saying that he had heard the announcement of the failure with the most profound regret. Professor Maclean glanced at several other topics of interest, and, among them, the discontent which appeared to be prevailing among officers of the Medical Department, which he trusted would prove to be only temporary in its nature.

The lecturer then stated that he had taken for the principal text of his discourse the report of the Indian Sanitary Commissioners, for several reasons. Of these, the first was his desire that the recommendations in that report should not be lost sight of, arising from a deep conviction of the immense and vital interests depending upon the manner in which they were received and acted upon; secondly, there was a need of meeting some of the objections which had been raised against the report,—objections whose unsound and futile nature his long residence in India enabled him to be fully aware of; and lastly, there was the circumstance that a large proportion, if not all, of those who were now just entering upon their course of military Medical studies at Netley, must pass a large part of their career in India, either in the new Indian Medical Staff or on regimental duty. An European force of nearly 70,000 men would probably be required for service in India in future, and it was of the utmost importance that those to whom the care of the health and lives of this great body of officers and men would be entrusted should be thoroughly versed in the sanitary knowledge essential for the proper performance of this responsible charge. Professor Maclean then discussed in detail the chief statistical statements advanced by the Royal Commissioners; explained the manner in which the deductions had been arrived at, and the documents on which they were founded, and maintained their general accuracy not only on account of the evidence from which they were derived, but also from his own personal knowledge of the country. He especially trusted, for the sake of the protection and safety of the individuals composing the large European army in India, that one of the recommendations of the Royal Commissioners, at least, would be carried out, viz., the appointment at each presidency of a Sanitary Board. The appointment should emanate from the Government at home, so as to be independent of all local interests. Not long since at Calcutta—one of the most unsanitary of all the large cities of India—a municipal body was locally appointed for the purpose of effecting sanitary improvements, and it was curious to note their mode of proceeding. They appointed a mayor, with a large salary, about £3000 a-year; but when it came to a question of a member of the Medical Profession being attached as an advising Officer of Health, they decided that the question should be postponed for four months. And this occurred in a city where a Norman Chevers was living!

The lecturer concluded a very eloquent address by warmly welcoming the new-comers in the name of his brother Professors and the Medical Staff at Netley, and urged them to turn to the best account the opportunities which had been provided by the liberality of Government for perfecting themselves in those practical studies which hereafter they would find of the utmost value to them in facilitating the right performance of their duties as Army Medical Officers.

ROYAL VETERINARY COLLEGE.

The Lecture Introductory to the Session 1863-4 was delivered, October 5, at the College by Professor Tuson.

The Lecturer said that veterinary or comparative Medicine, if rightly pursued, was excelled by few other occupations in interest and variety; its teachings were often of practical service in the higher calling of human Medicine, and their Professional duties would enable the students to foster one of man's noblest and best qualities—a humane disposition. They were adopting a young and rising Profession, in which they would have very great opportunities of distinguishing themselves, for there was still an abundance of work to enable the veterinarian and his art to occupy a more exalted status in the estimation of the public. Although not a veterinary Surgeon himself, he would point out to them a few of the paths which they ought to take. Firstly, it was necessary that before commencing their Profession they should have received a scholastic education, even better than that acquired by the majority of youths of the present day, inasmuch as the study of anatomy, physiology, or other Medical subjects, was incomparably easier to a pupil who had a knowledge of the classics than to him who was deficient in that respect, having by his previous training learnt how to study. Of late years persons desirous of obtaining a commission in the army must undergo an examination on subjects of general education, but the students of that College who obtained a diploma of the London Board of Examiners were entitled to hold commissions as veterinary Surgeons in cavalry regiments. He proceeded to state that it was advisable that they should gain a general acquaintance with the natural and experimental sciences, viz., zoology, botany, natural philosophy, and chemistry. The veterinary Surgeon who had received a general and scientific education would have an opportunity of gaining a more thorough knowledge of his art, would exercise his calling with greater skill, and would be much more likely to contribute towards the advancement of his Profession. With regard to chemistry, he would say with Sir Humphry Davy, "Its beginning is pleasure; its progress, knowledge; and its objects, truth and utility." This science was now one of the most important departments of human knowledge. It was especially useful in the departments of Medical knowledge with which they would have to acquaint themselves; and the information revealed by anatomy would be incomplete unless they knew of what they were each chemically composed. Without it the physiologists would have possessed very little knowledge of the process of digestion, respiration, etc. Pathology had been much advanced by the borrowed light of chemical science, and the majority of Physicians were now so perfectly conversant with that fact that they daily employed the test-tube as an aid to diagnosis, and to assist them in devising a rational mode of treating the diseases of the patients committed to their care. Having referred to toxicological chemistry as being worthy of greater attention than many of their predecessors had devoted to it, as there was still much room for investigation amongst the poisons of vegetable origin, he concluded by calling the attention of the students to the extensive alterations and improvements which had lately been carried out in the College, and the benefits which would result therefrom.

MEDICAL NEWS.

Royal College of Physicians of London.—At a general meeting of the Fellows, held on Wednesday, September 30, 1863, the following gentlemen, having undergone the necessary Examination, were duly admitted Members of the College:—

William Withers Moore, M.D. Edin., Brighton; Edward Francis Fussell, M.B. Aberdeen, Brighton; William Boyd Mushet, M.B. Lond., Upper Norwood; Henry Gowen Sutton, M.B. Lond., 5, Warlter's-buildings, Holloway; John Charles Thorowgood, M.D. Lond., 10, Finsbury-circus; and Samuel Fenwick, M.D. St. Andrews, 74, Harley-street.

At this meeting the following gentlemen were reported by the Examiners to have passed the Examination in the subjects of General Education:—

James W. Barry, Ramsgate; Edward N. Edwards, Chatham; David Evans, Wrexham; James Howard, Dukinfield; M. de Galway Hurlstone, Great Russell-street, Bloomsbury; John C. F. McDonald, Denbigh-street, Belgrave-road; Alex. McGregor, Acton, Northwich; Edmund W. Parkinson, Red Hill; Charles Parr, 16, Ashley-place, Westminster; George Parr, 16, Ashley-place, Westminster; Charles J. Rhodes, Pontefract; Frederick W. Strange, Beenham, Reading; and John L. W. Ward, Cardiff.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, October 1, 1863:—

James Ashburner Lightbourne, Church-street, Preston; John Skelton, 105, Great Russell-street, Bloomsbury; Alexander Towne, 29, Kingsland-crescent; William Milsted Harmer, Hawkhurst, Kent; Ralph Gooding, Ipswich, Suffolk; Charles Holman Parks, St. Colomb, Cornwall; George Frederick Walford Meadows, Otley, Ipswich; George Miles, Gillingham, Dorset.

The following gentleman also on the same day passed his First Examination:—

Charles Edward Covey, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Aspray, C. O., M.D., has been appointed House-Surgeon to the Western General Infirmary, Marylebone-road.

Barker, Thomas H., M.D. Lond., has been appointed Senior Surgeon to the Bedford General Dispensary and Lying-in Institution.

Duckworth, Dyer, M.D. Edin., has been appointed Resident Physician to the Clinical Wards, Royal Infirmary, Edinburgh.

Goldsmith, George P., M.R.C.S. Eng., has been appointed Surgeon to the Bedford General Dispensary and Lying-in Institution.

Hacon, Richard D., M.R.C.S. Eng., has been appointed Surgeon to the Bedford General Dispensary and Lying-in Institution.

Haines, R., M.D., has been appointed Acting Registrar at the University of Bombay.

Hamilton, W. G., M.D., has been appointed Medical Officer and General Superintendent of the Dundee Royal Infirmary.

Headlam, Thomas E., M.D. Edin., has been appointed Consulting Physician to the Newcastle-upon-Tyne Dispensary.

Philipson, George H., B.A., M.B. Camb., has been elected Physician to the Newcastle-upon-Tyne Dispensary.

Prior, Charles E., M.D. Aberd., has been appointed Senior Surgeon to the Bedford General Dispensary and Lying-in Institution.

Richards, Joseph P., M.R.C.S. Eng., has been appointed Assistant House-Surgeon to the Stockport Infirmary.

Robinson, Charles, M.R.C.S. Eng., has been appointed Senior Surgeon to the Bedford General Dispensary and Lying-in Institution.

Robinson, G., M.R.C.S. Eng., has been appointed Surgeon to the Bedford General Dispensary and Lying-in Institution.

Stephenson, T. Appleby, M.R.C.S. Eng., has been appointed Surgeon to the Radford Union, Nottingham.

DEATHS.

Allanby, John S., M.D. Edin., Assistant-Surgeon H.M. 95th Regt., at Hyderabad, India, on July 28, aged 27.

Crooks, Henry, L.S.A., at East Harling, Norfolk, on September 26, aged 62.

Gilbert, Henry, M.R.C.S. Eng., at 23, Upper Phillimore-place, Kensington, on October 5, aged 56.

Hansard, Frederick A., M.R.C.S. Eng., at Montacute, Somersetshire, on October 4.

Lindley, Joseph F., M.R.C.S. Eng., of Cheadle, Cheshire, on September 12, aged 36.

Macfee, Malcolm, L.F.P.S. Glasg., at Greenock, Scotland, on September 23, aged 27.

Newton, Samuel, L.S.A., at Withington Cottage, Astley, near Manchester, on September 12.

O'Hea, Matthew, M.D. Edin., at Scilly, Kinsale, on September 27, aged 58.

Price, James, M.R.C.S. Eng., at St. Owen's-street, Hereford, formerly of the H.E.I.C. Service, on September 24.

Webb, Henry B., M.R.C.S. Eng., at Tara, Navan, Co. Meath, on July 29.

Social Science Congress at Edinburgh.—The seventh annual meeting of the National Association for the Promotion of Social Science was opened at Edinburgh on Wednesday, October 7. The opening address was delivered by the President, Lord Brougham. His Lordship paid a fitting tribute to the memory of Sir Benjamin Brodie, who had once filled the office of Chairman to the Section of Public Health. In the course of his address he alluded to the labours of the members of the Sanitary Science Department of the Association, and to the benefits to be expected from the nursing sisterhoods lately introduced into this country. The present Chairman of the Public Health Section is Professor Christison, and we have no doubt that under his able presidency the Medical visitors to the Congress will be well rewarded for their attendance.

The Recent Inquest at University College.—It is to be hoped that an inquest recently held at University College Hospital, on the man killed by a runaway horse, will direct public attention to the serious nuisance now caused in many parts of London by the new Metropolitan lines of railway. Not only the whistles of the engines, as in that instance, may be productive of danger by frightening horses, but the mere noise accompanying the passage of trains is excessive and startling. Great complaints are made of this in many quarters. The girder bridges recently erected and in course of erection, being constructed of wrought iron plates bolted together on the spot with heated rivets, form a much more resonant material than the old cast-iron girders, and incalculably more so than the brick arches formerly employed. The roar of a passing train, especially if moving at a rapid rate, is terrifying in the extreme. It would be well if, in the neighbourhood of large thoroughfares, some substance calculated to deaden the transmission of sound were interposed between the rails and the iron substructure.

Scarlet Fever at Eastbourne.—During the past week or two quite a panic has been caused among the fashionable residents at Eastbourne, in consequence of the alarming prevalence of scarlet fever in that town, and they have been taking their departure from it in great numbers, much to the dismay of the lodging-house keepers. A number of deaths have already taken place from this epidemic, and among those who have fallen victims to it are two sons of Mr. R. Hanbury, M.P. for Middlesex, whose family reside here. Mrs. Hanbury also died on Sunday last, although not from the prevailing malady, and much sympathy is expressed for Mr. Hanbury under this severe bereavement. Eastbourne has hitherto been considered the most healthy of all the watering-places, in consequence of the Registrar-General's returns showing a lower rate of mortality there than almost anywhere else.

The Sugar Duties.—The controversy which has recently been carried on with respect to the sugar duties appears not devoid of interest to Medical men, who are large consumers of the article, not only pharmaceutically but as the framers of Hospital, asylum, and prison dietaries. Messrs. Travers and Sons are of opinion that an "*ad valorem*" tax is here, as in all other cases, vicious in principle. "We are aware," they argue, "this tax has on its face something infinitely simple and attractive. To charge 5 per cent. on the various qualities of an article seems so fair! If an inferior quality be worth £1, and superior quality be worth £10, what can look more just than to subject each to a percentage tax—5 per cent. on each, and neither can complain of any protection. This will be found, on closer examination, not to be the case. Let us suppose the relative values of two qualities of one article to be as one is to ten; that is to say that the public will give £9 more for the superior article than for the inferior. Add 5 per cent. to each, and the articles become worth as one guinea to ten guineas. Protectionists will say the same proportion is observed. If, however, they were in the place of the producer of the fine quality, they would find out speedily that there was no longer £9 difference between their production and their competitors, but a margin of £9 9s. They must either sacrifice this 9s., or they must seek another market free from an *ad valorem* tax, or they must give up producing their fine quality. In any case, not only does the *ad valorem* tax afford a premium to a low quality, by prohibiting the competition of the fine, but it gives the low quality a fictitious enhanced value. A fixed tax will be found not to have this effect, leaving natural relations of value undisturbed. Hitherto it has been contended, we know by many, that a pure *ad valorem* tax was beautiful in theory, but impracticable in its working. We confidently assert it is thoroughly vicious in principle, as the first essential of a tax is to raise money for Government with the least injustice to the tax-payer." In another part of their "Weekly Circular" they state their views more explicitly, and demand a remedy, which seems equitable and practical:—"To tax more highly a superior article, because science, energy, capital, and favourable circumstances have combined to make it excellent, to tax it with the avowed purpose of dragging it down to a level with the wretched production of sloth and incapability; to do worse than this, to drive everything like excellence from our market, and thus give bad sugar an undivided monopoly of, and fictitious value in it; this is the effect of the present scale. All we demand, and we demand it whatever may have been the attempted dicta of the late Mr. James Wilson, Mr. Cardwell, or any other authorities, is the right to buy fine raw sugar on the same terms upon which we are now forced to buy uneatable raw sugars. We assert, if necessary on our sole authority, that fine raw sugar is prohibited this market, and that nearly the whole that enters it is unfit for consumption until it has been refined a second time; that sugar, as it exists in the sugar-cane, is a pure white substance, and can, by the employment of proper apparatus and proper arrangement, be eliminated in that shape free from impurities; and we assert that were the present prohibitory duties removed, large quantities of fine sugar which are now forbidden our markets would pour into it, and be bought eagerly by the English public."

Infanticide at the Antipodes.—The crime of infanticide is attracting attention in Victoria. The editor of the *Medical and Surgical Review* (Australasian) published at Melbourne, says:—"Of the three great and influential motives which impel people to the commission of infanticide in the mother country,—the hope of gain, the fear of shame, and absolute distress,—the second only can be operative here. We have no burial clubs in which speculative mothers may, as it were, insure the death of their infant children, and make a commodity of calamity; no poisoning establishments in which the neglected offspring of women working in mills and factories are slowly dosed to death with drowsy syrups; and instances must be very rare of mothers destroying their children with the alternative of starvation before them. Nevertheless, the infant mortality in Victoria, or rather that proportion of it which occurs under suspicious circumstances, is sufficiently great to arrest attention and invite inquiry. From information kindly supplied to us by the Registrar-General of this colony, we learn that, in the year 1862, inquests were held on no less than 228 children of three years of age and under. In most of these cases the jury charitably assigned the cause to accident; and, in the existing state of the law, such a decision is not altogether surprising; but when we come to analyse the verdicts returned, it is difficult to disabuse the mind of the impression that, in very many instances, the deceased were the victims of foul play; or, where such a supposition was not warranted, that death was the result of gross neglect.

"'For evil is wrought by want of thought
As well as want of heart.'

Thus, we find no less than thirty-three deaths attributed to accidental scalds and burns, forty-five occasioned by drowning, thirty-two by suffocation (in four instances, one or both of the parents sleeping with the child having been tipsy), one found dead in a closet, another in a drain, another in a water-hole, and so forth. One child meets with its death by falling from the arms of its mother who was drunk, another dies of an overdose of opium, a third is scalded to death in hot beer, a fourth is killed by falling out of bed, a fifth by an inexplicable fracture of the skull, a sixth perishes of hereditary syphilis, a seventh is accidentally poisoned; while nearly sixty of the deaths are traceable to causes which denote neglect, or ignorance, or maltreatment on the part of the mothers of the children."

BOOKS RECEIVED.

New Views of the Cause, Prevention, and Cure of Yellow Fever and other Diseases produced by Miasma and Mephitic Vapours. Presented for the Safety of the Army of Occupation in the Southern States. By J. W. Redfield, M.D., a refugee from the South. New York: John A. Gray. 1863. Pamphlet, pp. 16.

⁂ We really cannot tell whether this book is written in irony or in earnest. The author sets out with the proposition that "the organisation instrumental and indicative of destructiveness fits a man or an animal to inhabit marshes, and to breathe miasma and pestilent vapours. It is a significant fact, that the natives of New Orleans, Mobile, Galveston, Key West, and the Gulf coast generally, like the alligators, serpents, wild cats, and blood-thirsty mosquitos of their adjacent bayous, swamps, and marshy woods, are naturally destructive, and possess the organisation which in vertebrate animals is indicative of such a disposition." This includes large canine teeth, and lots of bile. "If, then," says Dr. Redfield, "the United States soldiers are to survive the Southern climate, they must cultivate a brutal disposition, eat half-cooked beef and fish, avoid all vegetables and cooling substances, and take plenty of spirits, ale, and porter, and strong bitters. To live safely on the Gulf coast, a man must incorporate into himself something of all the animals that reside there." We really can't tell whether the author intends to give serious advice, or to utter sarcasms, when he thus recommends bile and brutality as essential to the safety of the army of occupation in the Southern States.

Oratio ex Harveii Instituto in ædibus Collegii Regalis Medicorum Londinensis habita. Die Junii xxvi., MDCCCLXIII. Ab Alexandro J. Sutherland, M.D. Oxon, F.R.S., Coll. Reg. Med. Lond. Socio.

⁂ Dr. Sutherland suggests that English might be a more convenient vehicle for this oration than Latin, a view which receives support from the title-page, where the date is given in good English form, Latinized. Perhaps many readers would hardly recognise it in its real Latin form—In ante diem vi. Calend. Quintiles. Moreover, "Gulielmo Gullo," and "Gulielmo Balio" sound strangely; though perhaps the former of these gentlemen would decline being translated into Mergus and still more into Veterator. Dr. Hue, Dr. Sayers, Dr. Forbes, and their services to medicine receive notice, with commendatory remarks on them and on the various benefactors of the College. The present president is congratulated on the prospect of a uniform Pharmacopœia appearing during his "reign," which we sincerely hope may prove a true prophecy.

A Safe, Speedy, and Certain Cure for Small-pox. Hertford: J. Rose. 1863.

⁂ "Humanity," writes this author, "groaning and writhing under so loathsome a disease—Affection, with tears, mourning her bereavements—Philanthropy, wistfully gazing heavenward for relief, each imploringly ask, Is there nought in Creation to alleviate this suffering, and to avert this mortality? There is. In the Providence of GOD a remedy has been discovered—a remedy so simple as to be perfectly innocuous, and so efficacious as in any stage of this dreaded disease to be uniformly effectual. THREE THOUSAND CASES of small-pox cured by the bitartrate of potash—cream of tartar—attest its virtues. Taken at the first stage of the disease, it at once arrests the fever and restores the patient. Administered when the sufferer, burning, swollen, livid, delirious, apparently ready to die, it has given relief and effected a cure." A paragraph in the *West Surrey Times*, announcing the discovery, was forwarded to the leading journals. "Editorial—perhaps Æsculapian—censorship consigned it, however, in the great majority of instances, to the waste basket." We will adopt a different course.

Debate in the House of Commons on the Proposed Introduction of the Metric System of Weights and Measures. London: Bell and Daldy. 1863.

⁂ This pamphlet is circulated apparently by the International Decimal Association, with a view of promoting the objects of that body. It contains a short introductory notice of the proposed new weights and measures as introduced by Mr. Ewart's bill. They are somewhat obscurely described as "four new units, of length, of surface and land measure, of capacity, and of weight, identical with those of the metric system, with the same nomenclature as that in existence in this country, with the addition of the word *new*, corresponding with the metric nomenclature, of metre, are litre and kilogram." Arguments in favour of the system follow, and a corrected report of the debate is subjoined.

The London Mirror: a Weekly Journal of National Institutions. Vol. I., No. 19. Weekly, 3d. London: Sidney, 147, Fleet-street.

⁂ The chief matter is a report of the newly proposed "Maternal and Affiliation Institution," which is another name for the "Society for the Prevention of Infanticide." It seems that, before the Society can get to work, "the Legislature must be invoked to alter and amend the present defective and anomalous bastardy law, by the substitution of a measure dealing both with the pecuniary and punitive aspects of the question, making the one more comprehensive, and the other more impartial and stringent." Meanwhile there is a nonsensical tirade against the employment of single women as wet nurses tagged on to the proceedings. We would urge on those who desire to lessen infanticide, that they should begin by teaching young women the value and sanctity of chastity.

Della Febbre Migliare, sua Origine, Decorso e Cura. By Dr. Gabriele Taussig. Second Edition. Roma. 1859.

⁂ Stated to be the amplification of a short memoir published in 1844, when miliary fever began in Florence to take an epidemic form. The present work is offered to young Practitioners "with a view to direct their attention to the study of a disease which for half a century or more has become common in all the northern parts of Italy."

Seventh Annual Report of the Medical Officer of Health of St. James's, Westminster. June, 1863.

⁂ A manly and sensible account of the writer's sanitary work and experience. It contains observations on the prevalent causes of death, and especially points out the frequency of consumption, which the author rightly, as we believe, traces to close confinement and want of air. He gives two practical suggestions well worthy of notice, viz., that cricket and other games should be allowed in the parks, and that cheap refreshments and unstimulating drinks should be allowed to be sold there, so as to induce the people to seek more enjoyment out of doors.

Report of Clinical Cases in the Royal Infirmary, Edinburgh. By Frederick Steell, M.D. Edinburgh: Oliver and Boyd. 1863.

⁂ Contains interesting details as to the results of operations. Fractures are given in tabular forms, with the date of admission, and discharge from the Hospital. Cases of excision of joints include eight of the elbow, all successful.

The Eighteenth Annual Report of the Sydney Infirmary and Dispensary. Sydney. 1863.

⁂ The report of an institution apparently in a very flourishing state, with an income of £8988. The Dispensary has recently been rebuilt on a larger scale, a grant from the Legislature of £900 having been made for the purpose.

Studien über Hoden. Von Dr. Georg Lewin. Berlin.

⁂ A monograph on the testicles, their anatomy and pathology. It is reprinted from Göschen's Deutscher Klinik for 1861.

The Westminster Review. New Series. No. XLVIII. October, 1863.

⁂ Contains good articles on Mexico, Shakspeare, Poland, Victor Hugo, Miracles (these, of course, are treated like the famous chapter on Snakes in Iceland), and on Wit and Humour. The *resumé* of contemporary literature is full and interesting as usual.

The Social Science Review. September 12 and 19.

⁂ To extirpate the Confederate Americans and burn Charleston with Greek fire is a matter which calls forth no censure. Not so the hanging of four murderers at Liverpool. An unusually clever article makes the punishment of death for murder the special delectation of the devil. It also makes him express his entire approval of the *Saturday Review*, which shows at all events that the Devil hates humbug.

The Morningside Mirror.

⁂ A very interesting periodical, written, printed, and published at the Morningside Lunatic Asylum, near Edinburgh. We may say of it, as of the *York Star*, and the *New Moon* of Dumfries, that if these are fair specimens of the wits of the insane, the sane must look out, lest the insane (whose increasing numbers are notorious) should come out of their asylums, and govern the world, and shut us up.

Report of the Bradford Eye and Ear Infirmary. 1862.

Quarterly Return of the Births, Deaths, and Marriages registered in the Divisions, Counties, and Districts of Scotland. Quarter ending June 30, 1863, No. XXXIV. Edinburgh: Printed by Murray and Gibb. 1863.

The Normal Position of the Epiglottis, as determined by the Laryngoscope. By George D. Gibb, M.D., M.A., M.R.C.P., Physician to the West London Hospital, and Assistant-Physician to the Westminster Hospital.—(From Dr. Beale's "Archives of Medicine.")

Australian Medical and Surgical Review. July, 1863. Melbourne: F. F. Ballière.

Australian Medical Journal. July, 1863. Melbourne: Wilson and Mackinnon.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon*.

Real Sufferer.—Consult your family Medical attendant.

Yorkshire Man.—By the Medical Act (section xxxi.) we think he can recover for Medicine and attendance in Surgical, but not in Medical cases.

G. J. H.—Only one book is known under that title. Our correspondent's supposition is probably a true one.

Dr. Sansom's second paper on Chloroform is in the printer's hands.

The letter of a Naval Medical Officer shall appear next week.

Raphides as Botanical Characters.—In this month's number of the *Ann. Nat. Hist.*, Mr. Gulliver continues the reports of his experiments and observations on this interesting branch of vegetable anatomy. After showing that orders which, in the adult plant, are destitute of raphides are equally devoid of them in the seed-leaves, he sows the seeds of several species belonging to orders characterised in the mature plant by raphides, and proves that raphides also as regularly abound in the seed-leaves. The difference between raphis-bearing plants and their allies which do not perform this office is therefore a fundamental one, and an addition to the many phenomena which remind us how little we know of the recondite operations of vegetation. Take, for example, of two orders closely allied a specimen of each, as *Epilobium hirsutum* and *Lythrum salicaria*, plants similar in habit, and growing together in the very same soil of the river-bank, and note the signal difference of their products. One plant has a regular part of its healthy structure abounding during its whole existence in raphides of phosphate of lime, and the other as regularly destitute of these, but affording sphæraphides of the oxalate instead. Thus the leading and constant function of Onagraceæ would be the formation of crystals of one salt, while Lythraceæ would be a laboratory of another form and composition of crystals, the performance of each of these diverse operations being a regular and special design of the plant-life in such cases. Hence, we can determine the affinities and contrasts of certain plants by a method at once novel, easy, and practical, independently of the parts heretofore used for this purpose. And by thus enlisting these crystalline products into the service of systematic botany we should not be employing a mere empirical formula, but methodically recognising really fundamental results of plant-life, and keeping before us such important phenomena in the economy of vegetation as must be especially valuable in a natural system of classification.

Vesical Catarrh.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—On the 22nd inst. I was called to see a case of vesical catarrh of four months' duration. The history is that the attack was ushered in by pains over the loins and back, at an early hour in the morning, while she (a farmer's wife) was attending to her daily occupations. Micturition suddenly became frequent, painful, and difficult, while mucous casts and phosphatic concretions were being passed. She is the mother of seven children, and has never had gonorrhœa, neither had the husband. Under these circumstances is it probable that the tendency to phosphatic calculi without the production of "stone" would, *per se*, give rise to the lamentable train of symptoms now present?

Infusions of buchu, uva ursi, with alkalies, sedatives, and warm fomentations, have been tried, without allaying the pains and frequent micturition.

I will be glad to receive information from anybody who has closely observed the cause and course of an obscure case of this nature.

I am, &c.

Limerick, September 29. T. B. Moriarty, A.B., M.D.

Variola and Varicella.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Do you consider varicella identical with variola? Are the vesicles of varicella umbilicated? My reasons for asking these questions are these:—I was called some little time ago to see a child, aged 7 years, who was suffering from a febrile condition of the system, with pain in the back, and severe vomiting. The next day there appeared about the face, head, and chest several vesicles of minute size, all having a slight depression in the centre. There had been two deaths from small-pox in the same street, and I immediately diagnosed "modified small-pox." The child had three good scars from vaccination. My patient's friends were astonished, and unknown to me obtained the opinion of another Medical man, who decided for "chicken-pox," which was much more palatable to the parents of the child. The boy had about fifty pustules in various parts of the body, and is pitted in two places only, over the right eyebrow and over the sacrum.

Setting aside the unprofessional conduct of my brother Practitioner in giving an opinion in my absence, I shall be glad for my own satisfaction to hear from you a confirmation of the fact I have always held to be so, that the vesicles of varicella are certainly not depressed in the centre.

I am, &c. "Noli me tangere."

Southsea, October 6.

*** There is no central depression in the vesicle of varicella. Varicella and variola are certainly not identical.—Ed.]

Sore Nipples.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In general practice cases of this troublesome affection are constantly to be met with, and the remedies for their relief are numerous. After having tried those generally used without benefit, I was induced, in a very obstinate case, to have recourse to the following treatment:—

The nipples and their areolæ being fissured, bleeding on the slightest touch, and so painful that the application of the child was dreaded, on account of the torture to which the mother was subjected, I employed a slight coating of the tincturæ benzoin co. to arrest all bleeding, and having carefully dried the parts with a soft muslin handkerchief, I applied a solution of gutta percha, so as to completely surround the nipple and cover all abrasions, giving it three or four coatings, allowing each to dry thoroughly before repeating the application. During the act of suction (only) a boxwood shield, with calf's teat, was used, and in the course of a few days all was well.

I make the solution thus:—Gutta-percha tissue, ʒj.; chloroform, ℥iij.; first place the tissue in a bottle, add the chloroform, shake, and it will soon dissolve.

The film rapidly formed by the evaporation of the chloroform is firm, elastic, and harmless, and, should it rub off, is very easily replaced. The almost painless nature of the treatment, the effectual protection from the contact of the air and irritation of the infant's mouth, recommend it strongly to general use. I have also used this solution with great benefit in several minor cases of Surgery instead of collodion.

I am, &c. William H. Castle, L.R.C.P. Edin. by Exam.

Commercial-road, Portsmouth, October.

A Welsh Doctor.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The Welsh Medicals do not often trouble you with their importunities, but the following is so glaring a specimen of the *morale* of a Welsh doctor, a person who styles himself as a Licentiate of the Royal College of Surgeons, and of the King and Queen's College of Physicians in Ireland, advertised week by week in one of the widest-spread hebdomadals in the Principality, that we cannot refrain from submitting it to your criticism. I enclose the original, and the following is a literal translation of the puff:—

DR. BELLIS, Doctor, Brynhyfryd, Amlwch,

Begs to inform the inhabitants of Amlwch and the surrounding country that he is a BONE SETTER, having been for five years studying under the eminent Surgeon, Mr. Butcher, of Mercer's Hospital, Dublin. Dr. Bellis may be consulted every Monday, from 11 to 12, in the house of Mr. Roberts, Penygreigwen; on Tuesdays, from 12 to 1, in the house of Mr. Jones, Crown Inn, Llanfechell; on Wednesdays, from 11 to 12, in the house of Mrs. Prichard, Post-office, Pensarn; from 12 to 1 at Llaneilian, in the house of Mrs. Hughes, Corn; on Thursdays, from 12 to 1, in the house of Miss Owen, Ty Coch, Cemmaes.

Trusting that you will allow this to appear in the forthcoming number of the *Medical Times and Gazette*, with your own comments upon it, I enclose my card. I am, &c. Anti-Quackery.

DR. BELLIS, Meddyg, Brynhyfryd, Amlwch,

A ddymuna hysbysu preswylwyr Amlwch a'r wlad oddiamgylch ei fod ef yn FEDDYG ESGYRN,—wedi bod am bum mlynedd yn efrydu o dan y llawfeddyg enwog Mr. Butcher, yn Merchars Hospital, Dublin. Gellir consultio Dr. Bellis bob dydd Llun, o 11 hyd 12, yn nhy Mr. Roberts, Penygreigwen; dydd Mawrth o 12 hyd 1, yn nhy Mr. Jones, Crown Inn, Llanfechell; dydd Mercher, o 11 hyd 12, yn nhy Mrs. Prichard, Post-office, Pensarn; o 12 hyd 1 yn Llaneilian, yn nhy Mrs. Hughes, Corn; dydd Iau, o 12 hyd 1 yn Cemmaes, yn nhy Miss Owen, Ty Coch.

Physicians' Certificates to Druggists.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In your issue of September 26 is a letter with the heading, "Is Old Parr Dead?" and signed "Godfather's Cordial," in which my name is mentioned as one of two Physicians who have lent their names to a druggist for the purpose of puffing a nostrum called "Martin's Infants' Preservative."

When I read the letter of "Godfather's Cordial," I assure you and your correspondent with the extraordinary but by no means euphonious designation, that no one was more surprised and disgusted than myself, for I had forgotten having written such a certificate, and most certainly had never heard of "Martin's Infants' Preservative" until then.

I immediately called Mr. Martin's attention to the matter. Mr. Martin's replies I enclose, by which you will see that Dr. O'Donnell and myself were perfectly innocent of lending our names for the base purpose of puffing a nostrum. Further, it should be clearly understood that there was no mention of "Infants' Preservative" when the prescription Mr. Martin mentions was placed before me.

I should sooner have given this explanation, but I understood that "Godfather's Cordial" intended to bring the matter before the Medical Society last Thursday. He did not do so, but the hon. secretary of the evening meetings of the Liverpool Medical Institution did; and I had the honour of explaining my conduct to the Society, and the pleasure of being acquitted by that body of any design to aid the sale of the nostrum in question. A gentleman, perhaps correctly, considered giving a certificate at all to a druggist by a Physician was, to say the least, an error, and that it would have been better, though more inconvenient, for the Physician to have attended before the coroner when compelled to do so. I quite agreed with the speaker, and I shall be more cautious in future. I regret I cannot answer the question "Is Old Parr dead?" for aught I know he may be as immortal as his pills.

Another letter appears in reference to this matter in your Number for this week, but as I believe Mr. Lowndes is satisfied that I did not wilfully err, I will not enter into the vexed subject of "advice gratis."

I am, &c.

1, Rodney-street, Liverpool, October 6. Alex. Stookes, M.D.

"To Alex. Stookes, Esq., M.D. "October 1, 1863.

"My attention has been directed to a communication in the *Medical Times and Gazette*, wherein your name, together with that of Dr. O'Donnell, is referred to. I at once hasten to explain to you, and through you to Dr. O'Donnell, how your names came to be inserted in the circular alluded to. Some time since a child died without having received any Medical treatment, and, in explanation of her apparently negligent conduct, the mother stated "she had given the child, who was always crying and delicate, the same medicine as she had given to her other children, viz., Martin's Infants' Preservative; that the others were all well, and she supposed it as good as anything," etc., etc. The coroner chose to make some uncalled-for remarks about its containing narcotic, etc. to a dangerous extent. Knowing as I did that it was a harmless compound, and a useful domestic article, I sought to set the coroner right, and correct his wrong impressions relative thereto. With this object in view, I called and submitted to you and Dr. O'Donnell the copy of prescription, and asked you to testify to its being at least not an unsafe preparation. You did so; certainly not with the view of my making capital of it, but with the view of my setting myself right with the coroner. I think, as this matter appears to create a certain feeling with some of the Profession, that I should at once declare you were not aware of my likelihood of publishing the same, but at the same time I can see no good reason why I should not do so. You and Dr. O'Donnell only did in a friendly way what I could have insisted on by a subpœna. "Your very obedient servant,

"T. Martin."

"At the time the testimonials were given I had no idea of publishing; but I may here remark that had I subpœnaed you, Dr. O'Donnell, and the whole faculty to give evidence, I could then have published without risk of offence. Next time (if a like occurrence should again take place), I will adopt such course; meantime beg to hope you will not see this in a very serious light. "Yours, "T. Martin."

The Indian Sanitary Question.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Will you kindly permit me, through your valuable columns, to offer one word more on this Indian sanitary question, the "Isaac Walton" theory of trout generation, without spawn or ova, by the mere action of the sun upon mud, seeming likely to become that universal of the generation also of diseases?

Here we have Bangalore, the most salubrious of all the Madras command, and in rate of mortality, for long series of years, scarcely inferior (among the same class) to London, being pointed to as owing its insalubrity to having all the cantonment sewage directed to the cooking and drinking water. Rather should it be recommended, on the "post hoc ergo procter hoc" mode of argument, that the sewage at other stations should be similarly directed. But let us examine what are those "camp diseases" met with at Bangalore, with their ratio of mortality per 1000 of strength.

"Fevers," including the most ephemeral, 197; "ratio of mortality," 1·8. Whole Madras command, 344—4·8. "Abscess of liver," mortality, 3; "dysentery," 8 9; whole command, 13·8. "Cholera," 4·3; "consumption" (generally in the returns under "bronchitis," "pneumonia," or "chronic catarrh"), say 2·5; "apoplexies," 2; "aneurisms and heart affections," 2; "all other diseases," 1·1. Total of deaths annually, per 1000 of strength, 25·6; or, taking in a farther period of years to 1844, 25·3.

In our young days all the ills of India and of the West Indies used to be ascribed to bad arrack and bad rum; but fashions change, and, like short waists or expansive skirts, run equally to extremes. Then as to barracks, except at the Presidencies, for want of room, we had, both at home and in the West Indies, always held up India as the pattern. By all means let us improve, for there is no place, perhaps, that does not admit of it; but at the same time let us not be led away with this "sensation mania," or wild dreams of millennial sanitude, irrespective of race, climate, and the general character of the various districts, whether at home or abroad.

With respect to the surface water, what is that of the Indus or Nile? and even in this country, where would be the wells if subjected to a like drying process six or eight months of the year? In fact, in many places, both of the East and West Indies, the whole dependence has to be placed on roof and surface water, collected into tanks during the rains, and there preserved for use during the dry and hot seasons, as in the island of Calabar and Bombay, composed of trap rock, with the lightest covering of soil and sand; while at Decca, the most deadly European station of the Bombay command, wells are abundant everywhere, not at the surface, but at the depth of thirty to sixty or eighty feet; indeed, there is one almost in every garden for the purposes both of supply and irrigation; and as for the skins in which it is carried, were not bottles formerly made altogether of skin? Nor for cleanness need they fear to bear comparison with our own water vessels.

The "cow-dung" floors, too. Was not the prophet Ezekiel, as a favour, allowed cow-dung to bake his bread with, because he had never eaten of anything that was unclean? We have often had bread baked with cow-dung ourselves, and at Poona had our breakfast-room floor sweetened up with a fresh coat of it every week; and as to female nurses, why, an order was extant when we entered the service (we suspect by the great captain of the age) prohibiting the employment of women as nurses, as being the source of every irregularity in Hospital; not to waive the matter of decency in a ward of young men, is it likely the matter would have again been mooted but for the religious element?

It is true the "Koonur river" is as bad nearly as the Thames, and the sewage most imperfect, but this arises from the low, flat, level character of the locality, little above the sea-level. Madras, however, is one of the healthy stations, and if anything could have been done further to benefit the sewage, it would have been by the present Marquis of Tweedale, than whom no one is better acquainted with the sanitary imperfections of all the Madras stations. Lately I observed the mortality had been one year, at Madras, as low as 14 per 1000 of strength; and in 1844, when we were there ourselves, it was only 10 out of an average strength of 1004. See *Medical Gazette*, vol. ii. of 1849, page 187-89.

I am, &c.

Dollar, October 1. R. H. A. Hunter, Staff-Surgeon, half-pay.

Why Chloroform is Safe in Females — 150 Deaths.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In my friend Dr. Sansom's accurate paper on chloroform, I think he has overlooked one link in the chain of causation which renders women better subjects for chloroform than men. One sees women every day under chloroform for operation for tumours of the breast; we watch them in that "nova febrium cohors,"—that sad new chapter of accidents of ovariotomy, plastic operations of perineum or vagina, etc., unknown to the men of the pre-anæsthetic age; more than all, we learn, and watch, and know the effects of chloroform in general midwifery, where the public begin to find out before us that it is a vast boon and a blessing (all these cases differing, of course, from anything analogous in the male subject); and yet chloroform with this preponderance of cases on the female side, is twice more safe amongst women than men; yet the cause of this immunity is scarcely what Dr. Sansom suggests, but rather, a greatly increased activity of the reflex system in females, especially of the abdominal muscles, which are respiratory muscles. Labour itself comes about by the full-grown fœtus acting at the fortieth week as a foreign body, the placenta degenerating, etc., all in consequence exciting the reflex system to expel the foreign body. There is no fear of chloroform if you have an active reflex system of respiratory nerves and muscles; and it may still be maintained that there is not one recorded case of death from chloroform during labour, while we have had probably now in Europe and America one hundred thousand labours under chloroform. Scarcely a week (at any rate not a month) escapes that we have not a death at some of our Hospitals. We are floundering in the dark as to these latter, mostly cases of sailors, cabmen, etc., habitual drunkards, where the small amount of healthy vitality (reflex action?) is quickly extinguished if care be not taken in the administration. Chloroform is wonderfully safe also in children. There, also, as in women, the reflex nerves are healthily active. As Sydney Smith said, however, the railway system would be pronounced perfect till a bishop or some one of the rank of an archdeacon, at least, was killed, so is it with chloroform; all these clearly-established positions will be denied and held for nought, or be as unknown and dishonoured as the very name of the real discoverer of anæsthetics, and "fatty heart" will still remain the dogma and nonsense of the schools, till some French prince or Turkish pacha shall have brought an action at law for the loss of his wife by chloroform, and Medical evidence is required in some law court at Westminster.

I am glad that in Edinburgh the best Practitioners there agree with the views of Van der Kolk as to chloroform in puerperal convulsions, which I suggested to our own Obstetrical Society here; indeed, in an interesting conversation, or "comparing of notes," a little time since with Professor Simpson, I was glad to find how thoroughly his experience and mine ran parallel as to this and all the main facts of anæsthetics. The late Dr. Snow's one error was to generalise from a set of post-mortem facts. If pathology is a grand science, and the power of generalisation a great function, and fatty heart not a chimera of fashion, then undoubtedly, in eliminating the law of death by chloroform, all our introductories would say the generalisation or chimera was *selon les règles;* but if the post-mortem appearances of Snow were only the result of the efforts for resuscitating the patient, which they were—if Claude Bernard tells us there is no science of pathology in the world at all—and if the power of generalisation is the rock on which all modern Medical science splits, we must revise our notions of cardiac syncope, the lancet in puerperal convulsions and "fatty heart,"—now very much a fashion in these cases rather than a fact.

Men such as sailors, bricklayers, cabmen, etc., are subject to more outdoor accidents and Surgical operations than women, as may be seen in "accident wards;" but this is balanced by the ovariotomy and other female operations already referred to; so that, on the whole, the numbers are pretty equal for each where chloroform is administered; and yet the main fact remains, that of 100 deaths, 66 will be almost always men and only 34 women. In the *Gazette Médicale* of February, 1861, there are 31 deaths tabulated; there is an American list also, in 1861, of 24 cases; it is most important to compare these with my lists and Snow's, in all 125 deaths, and some 25 since.

I am, &c.

25, Sackville-street, September 27. Charles Kidd, M.D.

P.S.—I shall take it as a favour, as there may be some misunderstanding of Dr. Sansom's figures, as he says I met two deaths, if you will let me say I have never had one death in my own practice, and never saw an actual death, though for something like ten or a dozen years I have been present or assisted with chloroform in about ten thousand cases, as Hospital reporter for the *Lancet* and various other journals. The two cases I met with were one at Guy's; the woman was dead some quarter of an hour before I was present. The other case was at St. Thomas's. I merely quoted them in my book, and some half-dozen others, where I attended the post-mortem examination next day with great anxiety to see what traces the chloroform had left. I have seen dozens on dozens of patients under chloroform all but dead, yet easily restored by a little skill and the usual modes of resuscitation. I always carry in my pocket a lady's fan, and have a clear idea where a "Faradisation" machine is on the premises in time of need. Dr. Baëder, now of Guy's, is the man referred to in my book (so often treated as a myth by shallow London reviewers), who says he has seen with his own eyes twenty (!) deaths from chloroform.

COMMUNICATIONS have been received from—

Mr. Rogers; Mr. Harry Lobb; Mr. Furneaux Jordan; A Yorkshire Man; Mr. Hunter; Dr. Heslop; A Real Sufferer; Dr. W. H. Castle; Noli me tangere; Pirdus; Dr. T. G. Wollaston; Dr. Barclay.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 3, 1863.

BIRTHS.

Births of Boys, 1037; Girls, 898; Total, 1935.
Average of 10 corresponding weeks, 1853-62, 1573·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	651	623	1274
Average of the ten years 1853–62	557·9	540·9	1098 8
Average corrected to increased population..	..	..	1159
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	..	3	13	4	1	9	5
North ..	618,210	5	4	36	1	5	8	5
Central ..	378,058	5	4	15	2	6	9	11
East	571,158	4	..	48	2	5	10	8
South ..	773,175	8	2	42	2	7	15	13
Total.. ..	2,803,989	22	13	154	11	24	49	42

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·660 in.
Mean temperature	52°
Highest point of thermometer	63·2
Lowest point of thermometer	35
Mean dew-point temperature	47·3
General direction of wind	S.W.
Whole amount of rain in the week	0·78 in.

APPOINTMENTS FOR THE WEEK.

October 10. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

12. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

Medical Society of London, 8½ p.m. The President's Address.

13. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

14. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

15. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

Harveian Society, 8 p.m. Mr. J. Z. Laurence will Exhibit his Reflecting Ophthalmoscope.

16. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

Western Medical and Surgical Society of London, 8 p.m. Inaugural Meeting of the Session.

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ORIGINAL LECTURES.

LECTURES
ON
THE BLOOD, LYMPH, AND CHYLE OF VERTEBRATA,

DELIVERED AT
The Royal College of Surgeons of England,
DURING THE SESSION OF 1863.

By GEORGE GULLIVER, F.R.S.,
Professor of Comparative Anatomy and Physiology to that College, and late Surgeon in the Royal Regiment of Horse Guards.

LECTURE II.—*On the Buffy Coat of the Blood—True Doctrine of John Hunter, and of Van der Kolk, Nasse, Henle, and Wharton Jones—The Lecturer's Experiments—Conclusions—Coagulation of the Blood—Practical Application.*

WE have shown, in the last Lecture, the insufficiency of several opinions therein specified concerning the cause of the formation of the buffy coat, and especially that the doctrines recently put forth by Professor Virchow on this subject are not only erroneous, but that they had, long before the appearance of his "Cellular Pathology," been fairly disproved by experimental inquiries in this country,—a warning the more needful because those errors have been, and still are, too widely patronised and spread among our pupils.

True Doctrine of John Hunter.—And this brings us to the fifth and last head of the subject—that of the increased tendency to an aggregation of the corpuscles as the cause of the formation of the buffy coat. We have already seen that Mr. Hunter was an advocate for the doctrine of slow coagulation, which had been correctly rejected by Hewson. But Hunter knew that there was another phenomenon connected with the production of the buffy coat, though nothing occurs to this effect in his last and great work "On the Blood." Indeed, had he not always regarded the red corpuscles and Hewson's "Inquiries" with such mistaken contempt, the doctrine of retarded coagulation, as well as Hewson's favourite one of tenuity, must have both fallen together under the genius of Hunter; for although he had declared that "the red globules, or the red blood abstracted from the other parts, need hardly be considered, as they hardly explain anything" (I. 234), certain it is that he was acquainted with their aggregation during the formation of the buffy coat.

In his "Surgical Lectures" there are passages foreshadowing, if not anticipating, the best recent observations on the subject. Here are his own words:—"When the action of the solids is of the inflammatory kind, or, what is perhaps the same thing, when there is too great action of the solids, the blood under such a disease more readily admits of a separation of its component parts, the red particles subside more to the bottom of the coagulum, and the coagulation of the lymph, though more slow, is firmer, the upper part of the coagulum being of an opaque white, in which state the blood is said to be sizy." (I. 381.) Here, then, Mr. Hunter expressly tells us that "the blood more readily admits of a separation of its component parts." Thus he is coming very near to the field of discovery. Let us see now how his vision further expands in the right direction, when he discourses as follows:—"In all inflammatory dispositions in the solids, whether universal or local, the blood has an increased disposition to separate into its component parts, the red globules become less uniformly diffused, and their attraction to one another becomes stronger, so that the blood when out of the vessels soon becomes cloudy or muddy, and dusky in its colour, and when spread over any surface it appears mottled, the red blood attracting itself, and forming spots of red. This is so evident in many cases that it is hardly necessary to wait till the whole coagulates to form a judgment of it. I think I can say when the blood is coming from the vessel, by its appearance in the stream, whether it will be sizy or not. When the blood has not an inflammatory disposition, the stream has a degree of uniformity and transparency in its appearance; but it is only an eye accustomed to it that can make this distinction." (I. 235.) You see among the diagrams (Fig. 16) a microscopic analysis of what Hunter described without the help of glasses; and his observations have been put fully before you, not only for the sake of truth and justice, but because it remained for me to dig up and show the value of this part of his doctrines, as none of his commentators or encomiasts had ever before made the slightest reference to Hunter's priority in this matter. But to me it did appear too bad when the claim to the discovery was made on the Continent, that it was duly endorsed and ratified here as if Hunter had never existed, and this, too, both in our Medical journals and Physiological compendiums.

Observations of Van der Kolk, Nasse, Henle, and Wharton Jones.—Schroeder Van der Kolk is one of the recent observers thus distinguished as the discoverer of the separation of the red corpuscles laterally from the liquor sanguinis in thin films of blood—the mottled appearance when the blood is spread over any surface, so well described by Hunter. The microscopic analysis was undertaken and well performed by Professor Hermann Nasse of Marbourg, Professor Henle, and Mr. Wharton Jones. I subjected the whole question soon afterwards to experimental inquiry, and with results confirming the general accuracy of their observations, but by a widely different line of examination; and these experiments turned out curious and instructive in many points of view, as may be seen at large in the 64th vol. of the *Edin. Med. and Surg. Journal*, and in the Notes to the edition printed for the Sydenham Society of "Hewson's Works."

The Lecturer's Experiments.—In the first place, it was necessary to survey the ground from the beginning, in order to learn how far the aggregation of the corpuscles might be as described by Hunter and his successors, and if that were determined in the affirmative, to ascertain under what conditions, especially as to time, the corpuscles thus separate from the liquor sanguinis, or might be prevented from doing so at all. The leading fact having been clearly verified (as shown in the diagrams, Fig. 16, in which the pale cells are

FIG. 16.

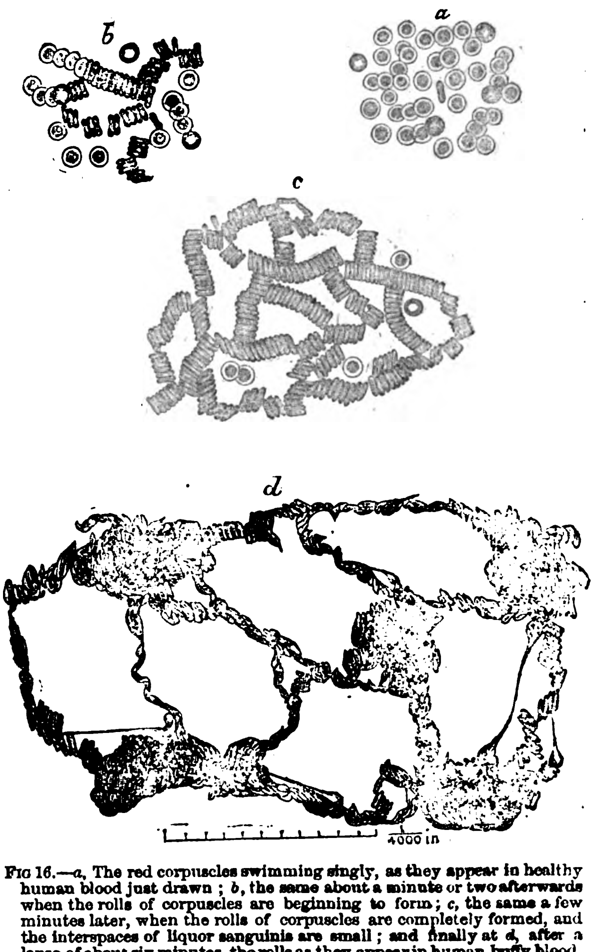


FIG 16.—*a*, The red corpuscles swimming singly, as they appear in healthy human blood just drawn; *b*, the same about a minute or two afterwards when the rolls of corpuscles are beginning to form; *c*, the same a few minutes later, when the rolls of corpuscles are completely formed, and the interspaces of liquor sanguinis are small; and finally at *d*, after a lapse of about six minutes, the rolls as they appear in human buffy blood, when they have still further run together into clumps—Hunter's "spots of red"—the interspaces of liquor sanguinis being large, so as to produce the mottled appearance visible to the naked eye. From their plasticity, increased stickiness or cohesion, and mutual pressure, the corpuscles are much altered in form, and appear as if partly melted together.

omitted), it was next established that the clumping of the corpuscles, so as to produce the mottled appearance, commonly requires from two to eight minutes.

Now, as to effect this separation of the corpuscles from the liquor sanguinis and their running together into clumps—Hunter's "red blood attracting itself and forming spots of red"—required a few minutes, it followed, supposing the falling of the corpuscles in buffy blood to be due to this phenomenon, that their rate of sinking would be most rapid in immediate connection therewith about this time, and least so before the formation of the red clumps. And so it was; numberless comparative experiments were made on the buffy blood of the horse, and all of them confirmed this fact in the most striking manner. Indeed, what had also never before been suspected, there appeared a sort of arithmetical ratio in the sinking of the corpuscles, except so far as this was disturbed by the increasing viscidity, in its progress towards coagulation, of the liquor sanguinis.

The results of one experiment, typical of many others of the kind, are shown in the Diagrams of the jars of blood, in which the corpuscles sunk as follows :—

In 2½ minutes the corpuscles sunk ⅛ of an inch.
,, 3½ ,, ,, ,, ¼ ,,
,, 4½ ,, ,, ,, ⅜ ,,
,, 5 ,, ,, ,, ½ ,,
,, 6 ,, ,, ,, ¾ ,,
,, 7 ,, ,, ,, 1 inch.
,, 10 ,, ,, ,, 2 inches.

Thus the corpuscles which at first took two and a-half minutes to sink one-eighth of an inch, sunk a quarter of an inch in the next two minutes, and had at last sunk two inches in ten minutes. Whereas, had they continued to fall at the same rate as at the beginning, before their aggregation, they would only have sunk just half an inch in these ten minutes! And that the rate of the sinking, as just shown, has nothing to do with that law of gravitation by which the spaces described by bodies falling freely from a state of rest increase as the squares of the times increase, will presently be evident. To make sure that there was no error of this kind, the rate of the sinking of the same corpuscles in serum was tried, when there was but a slight acceleration, and they took thirty-six minutes to fall two inches therein; and it will be recollected that serum is specifically lighter than liquor sanguinis.

But, after all, if the acceleration in the rate of the sinking of the corpuscles arise from their aggregation, it follows that, whenever this aggregation may be prevented, its effect should at once be destroyed. And nothing could be more conclusive in the affirmative than the many experiments which were made on this point. The fluids used for the purpose of preventing or destroying this clustering of the corpuscles were urine and other weak saline solutions of lower specific gravity even than the serum. When any one of these fluids was mixed with the blood, by quickly stirring them together with a stick, the corpuscles did not coalesce, but were kept separate; and although coagulation was thereby somewhat retarded, there was either no sinking of the corpuscles—no buffy coat—or they never fell more than half or three-quarters of an inch. Yet, in a portion of the same blood pure, stirred in the same way, and set by for comparison, there was scarcely an appreciable effect on the usual acceleration and depth of the sinking of the red corpuscles. Like experiments were made on the sinking of these corpuscles in pure serum, in which there was observed an acceleration, though to a less degree than in the liquor sanguinis, while this acceleration was in like manner arrested by adding saline matter to the serum, and most of all in the weak saline solution alone, which was not only thinner, but specifically lighter than the serum.

Then, while the acceleration in the sinking of the corpuscles was thus easily prevented, could it, on the other hand, be increased by increasing their coalescence? Yes. A certain mixture of mucilage and a minute proportion of common salt had such a remarkable effect in this way, that the corpuscles fell in the blood so treated one inch within four minutes, and two inches in five minutes. And in serum treated in the same way there was also a marked acceleration in the sinking of the corpuscles.

Next, as a pattern of numerous experiments as to the sinking of the red corpuscles of one animal in the serum of another, it was found that the corpuscles of healthy human blood, which take thirteen minutes to sink one-eighth of an inch in their own serum (specific gravity 1028), sunk in horses' serum (specific gravity 1029) more than twice as quickly, and this with a remarkable acceleration after they had plainly begun to sink. And in this case the clumps of the human corpuscles in the horses' serum were so quickly and distinctly formed as to be visible to the naked eye, and distinguishable from the serum; which clumps of red corpuscles could be broken up and dispersed at pleasure, and their rate of sinking arrested by the addition of the thinner and specifically lighter saline matter.

Thus the observations of Hunter, Schroeder Van der Kolk, Professor Hermann Nasse, Professor Henle, and Mr. Wharton Jones were completely confirmed, and this by a widely different line of investigation from that pursued by any of those physiologists, while the results involve other interesting questions, some of which may be found among the following:

Conclusions.—1. There is an increased quickness and compactness with which red corpuscles run into rolls, and these further into clumps, favoured by an increase in the viscidity of the corpuscles, caused by the state of the medium in which they swim, so that they thus separate from, and sink more rapidly in, the liquor sanguinis during the formation of the buffy coat. 2. This is not caused by an inherent change in the corpuscles, because the corpuscles of blood not buffy will thus run together when put into the serum of buffy blood. 3. But probably by a diminution of the saline matter of the serum and an increase in the spissitude or viscidity of the liquor sanguinis, since the aggregation of the corpuscles may either be increased by increasing this viscidity, or diminished by increasing the tenuity and saline matter. 4. During the formation of the buffy coat there is a remarkable acceleration, after a few minutes, of the rate with which the red corpuscles sink in the liquor sanguinis, which may be either hastened, prevented, or even reversed, by the means specified in the preceding paragraph. And this all holds true, though to a less degree, of the sinking of the corpuscles in the serum of buffy blood. 5. The corpuscles of buffy blood sink much more quickly in its serum than the corpuscles of blood not buffy do in its serum. And the corpuscles of blood not buffy will sink as rapidly as any in the serum of buffy blood. 6. Increasing the proportion of the corpuscles relatively to the fibrin hastens coagulation, and diminishes or prevents the formation of the buffy coat. 7. A diminution of the proportion of the corpuscles relatively to the fibrin retards coagulation and favours the formation of the buffy coat. 8. Increasing the proportion of water only has but little or no effect. 9. The slow coagulation of buffy blood, so far from being the cause, is merely an effect of a diminution in the proportion of the red corpuscles and their separation from the fibrin.

Coagulation of the Blood.—Finally, although we have so clearly shown that an addition of red corpuscles favours or hastens the coagulation of the blood, we must not conclude that they are either the efficient cause, or essential predisposing agent, of that coagulation. In truth, that cause remains yet so mysterious that we may well be thankful to those physiologists who, like Dr. Richardson and Dr. Davy, devote their talents to this important inquiry. We have shown in a former lecture (*Med. Times and Gaz.*, Feb. 28, 1863) that vegetable juices will coagulate when let out of the plant quite independently of the presence of corpuscles or cells; and that two varieties of animal serum, destitute of any corpuscles, may coagulate when mixed together, while no coagulation will ever take place in either of these fluids separately. Above all, in reference to the vital doctrine of Mr. Hunter, and the chemical one of Dr. Richardson—those fluids could scarcely be supposed to acquire life, merely by the operation of that mixture, and we have demonstrated that fibrin may be kept fluid for an indefinite time in pickle and yet retain its coagulable property; and it has been plainly proved by Dr. Davy's and my own experiments, that the coagulation of animal and vegetable fibrin may take place without the emission of any ammonia whatever. Besides, while fully admitting the predisposing effect both of the corpuscles and of extraneous or dead matter, these cannot be the central or fundamental cause of the coagulation, since we have seen that the serum which coagulated and that which would not coagulate were alike exposed in open glass jars to the air; and such truly dead and heterogeneous things as ice and alkaline salts preserve the fluidity and coagulable power of that very blood which will coagulate readily on the addition to it either of heat (mere thawing) or pure water; nay, even lumps of ice and crystals of salts, as I have often proved, may be added to specimens of such blood without causing its coagulation until the required condition, either of warmth or dilution, has been complied with; in short, every one of the causes, as far as I know, hitherto propounded as the essential efficient of the coagulation of the blood, has been tried and found wanting.

Practical Application.—As was said at the commencement, the subject of buffy blood occupies the neutral ground between physiology and pathology. We began at the physiological boundary in the soft obscurities of scientific research, and have travelled onwards to the other shore, where the rough waters of professional life lie open before us; and though this is no part of our present business, we may conclude with a glance at one of the interesting views now within our prospect. The efficacy of saline medicines has long been empirically known in inflammations. May not a knowledge of the action of saline solutions in correcting that state of the blood which is the efficient in the formation of the buffy coat, as so fully explained on this occasion, advance us a step in the rational practice of our Profession?

A CLINICAL LECTURE
ON
AMENORRHŒA AND HÆMATOMETRA;
OR,
RETENTION OF BLOOD IN THE UTERUS FROM OCCLUSION OF THE UTERO-VAGINAL CANAL.

By ROBERT BARNES, M.D. Lond., F.R.C.P.

GENTLEMEN,—The admission into the London Hospital of several cases exhibiting various forms of closure of the utero-vaginal canal suggests the propriety of considering them together in order to draw from them the light of mutual illustration. Ever so little reflection will show that this condition entails distress and danger only during the period of activity of the ovarian and uterine organs. Thus, during childhood and old age—that is, before and after the child-bearing cycle—occlusion of the uterus or vagina may produce so little inconvenience that the imperfection may escape detection. It is not, indeed, very rare for infants to be brought to the obstetric Practitioner, in whom the mother has discovered that the inlet to the vulva is obstructed. But this discovery is not led to by any suffering on the part of the child. The form most commonly observed at this age is simple imperforation of the hymen, or rather a preternatural development of the hymen. This structure is increased beyond its due limits both in extent of surface and in thickness. It is very desirable to deal with this defect in early age. The affection is then in its most simple state. There is no dangerous retention of fluids in the uterus, and by restoring the canal now you not only avert future danger, but the necessity of wounding modesty at the age of puberty. The operation is simple enough. Under the examination the child cries, and the abnormal structure becomes bulged out, presenting a thin, blue membrane, which you may puncture in the middle with a sharp-pointed bistoury; then, introducing a dilator into the opening made, you extend it backwards and forwards. A bit of oiled lint placed between the edges of the wound will prevent the parts from uniting; or you may snip away a small strip of the membrane by the scissors. If this is not done in infancy, the child may grow up quite unconscious of imperfection until the setting in of the ovarian function. At the age of fourteen possibly, but not usually before that of fifteen and sixteen, things may come to a crisis, as in the following case:—

Case 1.—*Hæmatometra—Imperforate Hymen — Operation — Cure.*

[Reported by Dr. POWELL, Resident Accoucheur.]

O., aged 18, a servant, from the country, applied at the Hospital early in June, 1862. For the last sixteen months she had suffered severe pains in the back and abdomen, recurring with great regularity every four weeks. She had also noticed a gradual enlargement of the abdomen, and a swelling between the labia. On examination, the vagina was found to be occluded by a tough membranous partition, attached just within the labia majora, bulging forward so as to protrude externally, and giving distinct fluctuation. The abdomen was much enlarged, and a tumour—the uterus—could be felt, extending as high as the umbilicus. She was admitted an in-patient in the following week. There was then an ulcerated spot the size of a sixpence in the centre of the vaginal swelling. An incision was made, which was followed by the escape of a treacly fluid, free from offensive odour. In the course of the two following days forty ounces of fluid were evacuated, the abdominal tumour concurrently subsiding. There was slight febrile movement on the day following the operation, but on the third day she was free from pain and felt quite well. The discharge continued gradually decreasing until the 20th June, when there was nothing but a little mucous secretion. The uterus being now restored to its healthy state, Dr. Barnes removed by the scissors a semilunar fold of the membrane. In its contracted state it was about half an inch thick. The vagina behind was much dilated. In a few days the patient menstruated naturally, and was discharged on the 1st July.

Two points suggested by this case claim attention—1stly, What would have been the issue had the case been abandoned to nature? The indication to give Surgical relief is so manifest and imperative that the opportunity very rarely arises of observing the entire natural history of cases of this nature; it must therefore be rather from a process of reasoning than from actual observation that authors have given at least a part of their descriptions. One event, the most fortunate, perhaps, is the spontaneous rupture of the membranes; in this case there was evident a process of spontaneous relief. The ulceration in the centre of the distended membrane would probably have been followed by rupture and cure in a few days; but if the membrane does not give way, the menstrual fluid gathering from month to month, first distends the vagina, then the cervix, and lastly the body of the uterus. It has been said that the pent-up fluid may find an escape through the abdominal openings of the Fallopian tubes. But this must be very rare. Nature has one method, if not more, of mitigating the effects of distension; the thinner watery part of the effused blood is absorbed, and it is no doubt in this way that, the eccentric pressure being taken off, comparative relief is gained in the intervals of the menstrual periods. It is only the more solid elements of the blood which are retained, so that the critical moment when the distension of the uterus becomes intolerable, may be for a long time postponed—that is, for many months, and even for two or three years. The retained fluid is so inspissated that it has been aptly likened to treacle or tar; indeed, its consistency is so great that it is not at all adapted to exude or burst into the abdomen through such minute canals as the Fallopian tubes.

Again, it is said that when no opening is made for the blood the disease sooner or later must become fatal, either by the rupture of the walls of the uterus, by an inflammation of the peritoneum, which is being continually irritated and distended, or by an attack of general marasmus. Inflammation and marasmus certainly have occurred, and it is impossible to deny that in some cases, if art had not intervened, the uterus would have burst; but I do not know an instance where this has happened. Under the stimulus of distension the uterus *grows*, much as it does in pregnancy; and here again we have a conservative effort of Nature, tending, with the absorption of a part of the effused fluid, to avert a fatal catastrophe. Still, the usual course is for the accumulation to gain upon the distensibility and growth of the uterus, so that a moment at length arrives when relief is urgently called for. But yet this is not always the case. When Nature cannot carry on a particular function, she sometimes gives up the attempt, and it is fortunate that the function of ovulation and menstruation is one of those not absolutely necessary to the life of the individual. It therefore happens occasionally that relief is brought by the cessation of menstruation, by persistent amenorrhœa. In these cases it is possible that under the long-continued abnormal strain upon the ovaries and uterus the structures of those organs become degenerated or atrophied. That something of this kind may take place I infer from the fact which I have several times witnessed, that after a labour a woman has never menstruated again. And we know that amenorrhœa is apt to follow various constitutional affections. You must not then look for death from rupture, inflammation, or marasmus as inevitable. Nor, on the other hand, can we afford to disregard or to underrate the gravity of the emergency. The indication to bring relief is imperative. This brings us to the second point. The mode of making the opening in the membrane is not very important. The great question seems to me to be whether the uterus should be artificially evacuated at once, or whether the discharge of the pent-up matters should be left to Nature. This question is very important, because, although the evacuation brings immediate relief, that relief is not obtained without danger. Inflammation and fever from the absorption of foul matters, resembling puerperal fever, have sometimes followed this apparently simple operation. It seems especially desirable so to conduct the operation as to minimise *shock*. For this purpose the *gradual* evacuation of the uterus is preferable to the sudden artificial emptying by compression and by washing out sometimes practised. I therefore confine my proceeding to the removal of the obstructing barrier, and leave the uterus to empty itself by its own gradual contraction, giving support by applying a compress and binder to the abdomen. The compress tends to ensure "rest" of the parts, and to exclude the inspiration of air, the great cause of decomposition and septicæmia. It should be remembered that the uterus has been enormously stretched, and that excessive distension long continued is apt to cause a degree of paralysis. It is not, then, reasonable to expect that the uterus can in a moment recover its tone and keep its cavity contracted when suddenly emptied. There is no reason for hurry. If the uterus takes two, or three, or four days to contract and discharge its contents it is all the better and safer.

We will now pass on to the next case. It is that of a young woman who had experienced some of the symptoms of impending menstruation. Physical obstruction being suspected, examination was made.

Case 2.—Amenorrhœa—Absence of Vagina.

G., aged 16, admitted September 20, 1862. Has never menstruated. The labia majora were normally developed, but there was no vagina, and no bulging or protrusion, as might be expected if any collection of fluid had existed behind.

On the 23rd a minute exploration was made by aid of chloroform. A catheter was passed into the bladder, and the urine drawn off. A finger was then passed into the rectum. In this manner the finger in the rectum clearly felt the catheter in the urethra and bladder, there being nothing but a thin septum between. There was no trace of vagina, nor could any solid substance be felt by pressure between the hand above the pubes and the finger in the rectum, so that if a uterus existed it must have been very small and imperfectly developed. Possibly there was also defective ovarian development. At any rate, there was no sign of accumulation of menstrual fluid. There being no substance between rectum and bladder out of which a passage could be made, the idea of opening up a vagina was abandoned.

Such cases are rare. It is clear that an examination only could have revealed the true cause of the amenorrhœa. The importance of detecting that cause must be obvious. The following case affords another illustration of amenorrhœa from physical imperfection :—

Case 3.—Amenorrhœa—Undeveloped Uterus—Undeveloped Ovaries (?)

C., aged 20, single, admitted April 5, 1862. Has never menstruated. Has always been weak. On examination, the uterus was felt very small, like the atrophied uterus of anility; the roof of the vagina was a firm, resisting, smooth expansion. No defined tumour could be felt above the pubes. Several examinations were made at intervals, but no evidence was ever obtained of accumulation of menstrual fluid. She was under observation several months. No menstruation appeared. From childhood she had been liable to diarrhœa. She had a wan, anæmic aspect.

In such a case we can, of course, only look to constitutional treatment for relief.

The next case is a remarkable one :—

Case 4.—Hæmatometra Uteri—Atresia of Vagina by Cicatrisation—Operation—Cure.

F., aged 28, came as an out-patient on the 18th July, 1863; had borne one child eight years ago; had menstruated regularly until seven months back, when she had typhoid fever. She had recently before that been in the Hospital labouring under venereal disease. Convalescent from this affection and the fever, she began to suffer from symptoms of obstructed menstruation. She had violent abdominal pains; latterly has pains nearly every day resembling labour-pains, which are allayed by hot flannels, and is conscious of a swelling of the lower abdomen. There is an expression of great suffering, and some febrile movement. On examination, the vagina was found closed down to near the vulva, forming a short, shallow *cul-de-sac*, quite smooth, no trace of cervix uteri being perceptible. The enlarged uterus could be felt behind the pubes, but by depressing it by the hand outside it could not be brought within reach of the finger in the vagina. There was, in fact, absolute obliteration of the vagina by cicatrisation along nearly its entire length. A smooth, white cicatricial tissue could be seen at the summit of the *cul-de-sac*. It is probable that this occlusion had taken place during the healing of the venereal sores. The patient at this time declined to enter the Hospital. On the 8th August, however, she came again, bent almost double with acute abdominal and pelvic pains. She was immediately sent upstairs, when, aided by Mr. Little, I proceeded to open up the obliterated vagina. The perinæum being retracted by a duck-bill speculum, I made small cautious incisions with a pointed bistoury through the middle of the cicatricial tissue, and, partly by alternate small nicks and stretching by the finger, I gradually opened up a canal an inch long, and large enough to admit the finger. After the first incisions, pressure upon the enlarged fundus uteri above made the lower segment of the organ project at the bottom of the wound. This served as a guide to further incisions, and gradually the artificial canal was extended, great care being taken to work more and more forwards towards the base of the bladder, so as to avoid opening the peritoneum in Douglas's sac. The operation had now lasted an hour, and it was considered desirable to postpone further proceedings. On the 10th the operation was resumed. A catheter was placed in the bladder, and held up close to the symphysis pubis to guide the incisions. The finger in the rectum felt the lower segment of the uterus distended in a globular form. It was hoped that by depressing the fundus uteri from above, and pressing the lower segment forward by the finger in the rectum, the cervix might be so tilted forward as to project prominently at the bottom of the wound that it might be seized by Museux's vulsellum. This, however, could not be done. Cautious nicks with the bistoury were therefore proceeded with, until presently the os uteri was struck, as was made manifest by the oozing out of thick, ropy, brown-black blood. So tenacious was it, that it could be drawn out in a string by the forceps. It was not, however, considered right to empty the uterus, but to leave the evacuation to be effected by the spontaneous contraction of the organ. The patient was put to bed; an opium suppository was applied, and a firm compress adjusted to the fundus uteri to favour contraction. In the course of the next two days the uterus had emptied itself. She had not had a bad symptom. On the 19th the uterus could not be felt above the symphysis. It was my intention to dilate the os uteri by introducing a bougie, made of the Lanimaria digitata, but the patient felt herself so well, and was so urgent to leave, that I was obliged to discharge her as an out-patient. She presented herself in the following week free from suffering.

This case is one of unusual interest. It is worthy of remark that had the speculum been employed in the treatment of the original disease the vagina could not have become obliterated. With regard to the operation selected, that appears to be vindicated by the result. This is just the case in which puncture by a trocar through the anterior wall of the rectum has been forcibly recommended. It is certainly much more easy than that of dissecting up an obliterated vagina. But still I can only look upon it as a *pis aller*, a last resource, if the restoration of the natural passage prove impracticable. I do not forget that the history of this case is not yet complete. This poor woman may fall pregnant. In that event, the contracted vagina will be a source of difficult labour. It may even be necessary to bring on labour prematurely. Unpromising as it looks, I should not, however, despair of her giving birth to a living child through the combined aid of artificial dilatation, incisions, and turning by external and internal manipulation, a method I have successfully carried out in similar cases. We have yet another variety of occlusion of the womb.

Case 5.—Senile Prolapsus Uteri—Occlusion of the Os Uteri.

On July 15, 1863, an old woman presented herself on account of procidentia uteri. There was complete eversion of the vagina, and the mucous membrane had assumed the appearance of skin. The uterus was so far atrophied that only a thin cord could be felt through the doubled vagina. Owing to constant chafing of the prolapsed parts between the thighs, the mucous membrane round the os uteri had been congested and ulcerated; and in cicatrising had completely obliterated the cervix.

On the 24th August we also admitted a similar case :—

Case 6.—*Atrophy of the Uterus—Procidentia—Closure of the Os Uteri.*

C., aged 46, has had three children, the last seven years ago; has not menstruated since. Had no prolapsus till two years ago. Since then continuous procidentia and discharge. Has worn a perinæal pad. The vagina is quite everted, and there is a large ulcerated surface, caused by chafing of the pad. The mucous membrane has been glazed over with epidermoid tissue. A minute depression alone indicates the seat of the os. This is quite cicatrised, but on pressing a probe against it, the instrument can be made to penetrate an inch up the cervix. The cervix is elongated, and the uterus atrophied.

This closure of the cervix uteri in women suffering under anile atrophy and procidentia is by no means uncommon. The uterus has no longer any function to perform. There is no normal secretion that wants an issue, so that the occlusion ordinarily causes no inconvenience. Still it is desirable so to treat these cases as to avert this accident. The perinæal pad is a wretched palliation or makeshift. Unless it succeed in maintaining the uterus within the vagina, which it cannot be depended upon to do in women who have to work, or in those who object to spending their lives reclining on the sofa, it makes matters worse, producing ulceration, bleeding, and purulent discharge. The womb falls through because it is atrophied, because it has lost the support of the muscular and adipose tissues of the pelvis, which also tend to degenerate in old age. Mechanical support to replace that which is lost is essential. The most generally effectual support is the stem-pessary, which a large number of out-patients are wearing with perfect comfort. The uterus thus maintained *in situ* cannot become ulcerated or occluded.

We have thus passed under review a series of cases exhibiting not only occlusion of the genital canal at various epochs of life, but also at various points of the canal. It must not, however, be concluded that the history of obstruction of the menstrual flow from physical causes is exhausted. No; without a doubt fresh clinical facts will come before us showing new phases of the affection, suggesting new reflections, and perhaps modifying our present conclusions.

ORIGINAL COMMUNICATIONS.

THE REMEDIAL POWER OF ICE AS USED IN THE TREATMENT OF PARALYSIS AND DIABETES.

By JOHN CHAPMAN, M.D., M.R.C.P.

Although experience justifies me in relying with great confidence on cold and heat applied to various parts of the back as remedial agents in the treatment of numerous diseases, I deem it expedient of course to avail myself of every possible aid, and therefore rarely avoid the use of medicines altogether. But in a scientific point of view it is obviously desirable that when a new remedy is brought forward, its efficacy should be tested by the only satisfactory method, viz., that of using it alone. This method has been adopted in the treatment of the cases reported below. In the case of hemiplegia it will be seen that strength has been restored to the paralysed limbs; that, though they were generally cold before the application of the ice, they are now permanently warm; that the previously constipated bowels are now open daily, and that the headache, formerly habitual, has wholly ceased. Of the treatment of diabetes by means of ice, in one case during twenty-four days, and in the other during thirty-five, the results are not less satisfactory; without the use of medicine, and without tormenting the patients by any kind of restriction in respect of food, a simultaneous and rapid diminution of the daily quantity of urine voided, and of the sugar excreted with it has been effected, while the health and strength of the patients have correspondingly increased.

Those readers who are not already acquainted with the principles of my discovery, that cold and heat applied to different parts of the back are capable of exercising a most powerful remedial influence over a very large number of diseases, are referred to my paper published in the *Medical Times and Gazette*, July 18 last, and entitled "A New Method of Treating Disease by Controlling the Circulation of the Blood in Different Parts of the Body." I may here repeat, however, that cold applied to any of the ganglia of the sympathetic nerve on either side of the spinal cord exercises a sedative influence upon them, and through them upon the vaso-motor nerves which emerge from the particular ganglia acted on, the result being a dilatation of, and increased circulation of blood through the vessels to which those nerves are distributed; and conversely, that heat similarly applied to any of the ganglia stimulates them, and through them the vaso-motor nerves which emerge from the particular ganglia acted on, the result being a contraction of, and diminished circulation of the blood in vessels to which those nerves are distributed.

It is upon the discovery of these facts that my practice of applying cold or heat to some part of the back as a curative process (which might be appropriately designated Vaso-motor Medicine) is founded.

In treating paralysis as well as diabetes (which I regard as also a disease of the nervous system), my intention is to increase the flow of blood, and thereby the transformative and nutritive processes of the parts affected; this intention has been fulfilled in the cases reported below, by applying ice to the back in the manner described.

A boy, aged 13, afflicted with hemiplegia (left side) was brought to me June 1, 1863. At this date I made the following notes of his condition:—Has a florid complexion, looks healthy, and is very intelligent. Complains chiefly of being unable to use his left arm. He cannot raise it above his head, as he can the right one—being unable to lift the hand higher than the face. The fore-arm cannot be completely extended, and is firmly fixed in the prone position. The wrist and hand are not only powerfully drawn to the ulnar side, but so firmly flexed on the fore-arm as to resist whatever extending force the patient can apply with his right hand. If by additional external force they be brought into a straight line with the fore-arm, immediately they are released from it they return to their abnormal position. The metacarpal bone of the thumb is strongly adducted and held (immovable by the patient's will) in the palm of the hand. The four fingers are permanently bent inwards; the middle one being flexed over the end of the thumb and deeply indented by the thumb nail. The third phalanx of the index finger bends backwards on the application of the slightest pressure, and is incapable of offering any resistance, that fasciculus of the flexor profundus digitorum, which converges into the tendon of this finger, being paralysed. The whole upper extremity of the left side is considerably shorter and smaller than that of the right. The left leg is also shorter and thinner than the right, although the arrest of growth has been less in the leg than in the arm. The patient cannot stand on the left leg, and when he attempts to extend it completely he feels a stiffness at the top of the calf. If he places the heel on the ground, and then lifts up the forepart of the foot, it immediately drops,—he cannot sustain it. He can bear no weight on the fore part of the foot, and cannot bend his toes either upwards or downwards, except in a very slight degree. The tendo-Achillis has been divided. The right pupil is slightly the largest; the tongue deviates to the left side. The patient suffers from frequent and long-continued headache, on an average three times a week; if he gets up with it it lasts all day. His back is peculiarly sensitive; he bursts into hysterical laughter the moment it is touched. The whole of the left side is habitually cold. Bowels constipated; not opened oftener than every other day. The patient's malady originated, his father says, in a fall on his left side when he was six months old. From this time the elbow was observed to be slightly bent, and the fore-arm always pronated. In his twelfth month the weakness was first noticed in the leg. In his third year he was taken to l'Hospice des Enfants Jesus, at Paris; then to "a private Doctor," who bandaged the arm and hung a weight to it; he subsequently attended at the Orthopædic Hospital in London, where, in addition to other treatment by galvanism, etc., the tendo-Achillis was divided; and finally he was a patient during two years at another metropolitan Hospital.

My prescription, June 1, was,—To wash the patient all over every morning in cold water; to clothe him in flannel down to the wrists and ankles; to apply ice to the whole length of the spine during three hours three times a day; to rub the back vigorously several minutes each time the ice is taken off; to rub the left arm and leg frequently, and to make frequent and continuous efforts to supinate the fore-arm.

June 8.—The patient's limbs have been rubbed very little; in other respects my injunctions have been complied with. His left arm and leg have become quite warm, and he has not had headache once since the ice was first applied.

15th.—Still no headache; the bowels are now open daily; the preternatural sensitiveness of the back is gone; and when the left heel is placed on the ground the fore part of the foot can be held up during at least five minutes. To use only two bags of ice daily—one in the morning and one at night; in other respects to go on the same as before.

July 14.—The power of the whole left arm, either for movement or lifting objects, has greatly increased; the hand is much less flexed and drawn to the ulnar side than formerly; the metacarpal bone of the thumb, which even a fortnight ago needed a good deal of external force to draw it from the palm, can now be abducted by the will of the patient himself; he can open the fingers and can extend them completely; and the third phalanx of the index finger, formerly paralysed, he can flex strongly. His left leg also continues to grow stronger: he can stand alone upon it without support for a considerable time; the stiffness formerly felt at the top of the calf when he attempted to extend it completely is gone; he can hold up the fore part of the foot when the heel is on the ground as long as he likes; he can move the toes, especially upwards, much more freely, and, as he says, he walks "much better" than formerly. Ordered the extensor muscles of the fore-arm, especially those of the thumb, to be galvanised frequently; the treatment in other respects to continue the same.

28th.—When the hand is in a passive state it is now quite straight in relation to the fore-arm, and its grasping power is notably increased. The patient can walk on either the heel or toes of the left foot, and in ascending stairs can bear all his weight so completely on his left toes as to be able to go up by advancing each foot a step alternately. The bowels continue to be opened daily; the left side continues remarkably warm, and during the two months of treatment headache has never been felt.

As the radial side of the fore-arm has been turned inwards ever since infancy, it is probably held in that position, not only by the pronator muscles, but by adherent tissue developed between the immobile structures. Holding this opinion, I directed the boy to make continuous efforts forcibly to supinate the fore-arm, and already the rotating power has increased. If his left tendo-Achillis had not been divided he would now walk, I believe, with only such a slightly perceptible limp as would be due to the difference in length of the two legs; there is more unevenness in his gait than that difference will account for, and I ascribe it to the operation which he underwent. Indeed, he could walk better, he says, before the operation than afterwards; and he is probably right, for he also says that before the operation the muscles of the calf were fully developed, whereas afterwards they gradually wasted.

In the *British Medical Journal* for September 12, 1863, Dr. Goolden has reported the results of his treatment of a case of diabetes in St. Thomas's Hospital, chiefly by means of the Turkish bath. He closes his report as follows:—

"Since the above report, the quantity [of urine] is reduced to four pints, and specific gravity from 1022 to 1030; and this improvement followed the application of ice to the cervical vertebræ in an india-rubber bag, as suggested by Dr. Chapman."

As Dr. Goolden has published the case, I may without impropriety give a brief history of my part of the treatment of it, and thus correct the errors inadvertently made in the above-quoted statement. The first error is of course a clerical one, due to a transposition of the figures; the writer doubtless intended to say that the specific gravity was reduced from 1030 to 1022. The second will mislead: the ice is said to have been applied "to the cervical vertebræ." It was applied to the cervical vertebræ, but also to the dorsal: a bag four inches wide, filled with ice, was applied from the base of the skull along the neck and back as far as the lowest angles of the scapulæ.

The patient, William S., became conscious of being unnaturally thirsty in October, 1862, and was admitted into St. Thomas's Hospital, under the care of Dr. Goolden, February 10, 1863. After admission, and up to February 21, he made from ten to fifteen pints of urine daily, the specific gravity being from 1041 to 1043. At that date he was ordered a Turkish bath three times a-week, and this treatment was continued till August 12. The quantity of urine passed daily was gradually reduced to five pints by June 3, and by June 6 the specific gravity was reduced to 1030. From June 6 to August 12 no further progress was made by means of the Turkish bath; the quantity of urine voided continued the same, viz., five pints, and during the same period the specific gravity averaged 1032.

August 12.—The Turkish baths were discontinued, and I was invited to treat the patient by means of ice, applied as already mentioned. At this date I ordered two bags of ice to be used daily.

After August 24 three bags were used. The results are as follows:—

Quantity of Urine Voided Daily.

From August 12 to 19th inclusive	5 pints
„ „ 20 „ 31st „	4½ „
„ Sept. 1	4¼ „
„ „ 2 to 5th inclusive	4 „

Specific Gravity.

From August 12 to 14th inclusive	1030
„ „ 15 18th „	1029
„ „ 19 23rd „	1029
24	1026
25	1023
26	1028
27	1026
28	1022

Much to my regret, Dr. Goolden at this date ordered the Turkish baths to be resumed, the ice treatment being continued.

Specific Gravity.

From August 29	1023
„ „ 31 to Sept. 4 inclusive	1026
September 5	1023

On August 30, the patient received a shock, two men having vomited blood in his presence. He said he felt "queer," and continued so all the following day. This fact may account for the rise in the specific gravity between August 30 and September 4, seeing that the urinometer again indicated 1023 on the 5th. At this date, as Dr. Goolden wished to resume his trial of the Turkish bath alone, my treatment of the patient was discontinued.

I have now another case of diabetes under treatment, and, after an adequate experience of the effects of it, will publish a report. Meanwhile, I may say that the patient has ordinary diet, eats what he likes, takes no medicine, that during the five weeks he has been under treatment the quantity of urine voided daily has been reduced from nineteen to eight and a-half pints, and that the specific gravity has fallen from 1041 to 1030. The patient's skin is becoming moister and softer, and he reports himself as less thirsty and hungry, and, at the same time, stronger and better.

ON THE

ADMINISTRATION OF CHLOROFORM.

By ARTHUR ERNEST SANSOM, M.B.,
Late House-Physician and Physician-Accoucheur's Assistant at King's College Hospital.

(Continued from page 326.)

When Dr. Simpson discovered the anæsthetic properties of chloroform, a tumbler with a napkin enclosed constituted his inhaler. The great end was attained,—a fluid, the vapour of which was readily given off at the temperature of the surrounding air, was found to be complete in its power of annulling sensation. Of course, when it became more frequently used, patients, by coughing and otherwise, testified to the necessity of a free dilution of the vapour with atmospheric air. However, it was not thought necessary to employ other means to ensure this dilution than to allow air freely to circulate between the face and the chloroform-moistened surface. A towel or a napkin was ready at hand, and being folded into a cone, and chloroform being poured upon it, either served its purpose apparently well. As far as simplicity goes, this plan had, and has, everything in its favour; but yet it cannot be questioned that this very simplicity has done harm. No one will doubt it on knowing that people have been found to administer chloroform on an old stocking or a kid glove. When, however, cases of death occurred from the use of chloroform, and when experiment taught that an unduly high percentage of chloroform-vapour was fatal to animal life, it became very necessary to reinvestigate the safety or danger of the "simple" mode of administration. Dr. Snow clearly proved that patients could not breathe an atmosphere containing more than five per cent. of chloroform without danger. He used all his influence to bring about a principle of uniformity in the administration of chloroform. Nevertheless, there still exists very largely the old plan,—"simplicity," or "laxity," according as it is regarded.

It is clearly our duty to do our utmost to obviate not only every danger but every tendency to danger. The positive danger is so little seen that many have said to me "I have given chloroform hundreds of times, and have never had a fatal case." One Surgeon in particular told me, "I see no reason to alter my mode of giving chloroform, I have given it two thousand times without a mishap." The answer to this is, "you may give it twenty thousand times before having a case of death; and yet that will be only your just proportion according to our present data. And yet you must try to make the chances of death less than one in twenty thousand."

In opposition to this plan of convenience in chloroform administration, Dr. Richardson has thus said—"To give chloroform on a linen rag, a piece of lint, or a sponge is at once as unscientific as it is wasteful, and as wasteful as it is unsafe. Given in this way no check whatever is put upon the quantity absorbed by the patient, while the surrounding air, charged also with the vapour, is annoying to the operator and to all around."(a)

When we come categorically to examine the cases of death said to be from chloroform, we find that the causes disposing to the fatality are, so far as are at present ascertained, these: (1.) Impurity of chloroform. (2.) Employment of chloroform in cases wherein it is hurtful—such as in delirium tremens, etc. (3.) Laxity in the administration. If objection be taken that this last is not a cause of death, it must be controverted by reference to such cases as the following four:

(1.) "Taken disguised with perfumes by the patient herself."

(2.) "Patient himself applied the chloroform."

(3.) "Given, by an unprofessional person, on lint rolled up in the hand."

(4.) "Taken by a gentleman for the relief of toothache."

It being granted that these at least are instances in which the improper administration or self-administration of chloroform has proved fatal, it becomes us to pursue the question further, and see if any wider interpretation is to be taken to the term "laxity."

In looking over eighty cases of death from chloroform, I find that seventy-eight occurred after its administration on a towel, napkin, or sponge. I know that other cases have occurred since my examination of these records, wherein due dilution of the chloroform-vapour has been provided for, and I am aware that we have no sufficient data to go upon as to the number of times that an inhaler has been employed; still, the potent fact remains, that, whereas death has occurred from chloroform administration in something like 200 instances, it has only resulted in about a dozen where the proper dilution has been arranged.

No one can pretend to guarantee a regularity or an exactness in the administration of the anæsthetic when a napkin is used instead of an inhaler. At one time the patient may take a breath of air highly charged with chloroform-vapour; at another he may get almost atmospheric air alone. The only index, then, of the patient's safety is the absence of signs of danger; but my strong opinion is that the anæsthetic state should be kept in bounds by no such marks as these. Moreover, there are these facts which indicate the necessity of a more than ordinary care at the early stages of the administration, and which show that fatal symptoms may occur when so little chloroform has been used as to give no anxiety whatever to the administrator. "In one instance in which only thirty drops had been inhaled in vapour, the patient died in one minute; and in another, so small a quantity as fifteen or twenty drops proved speedily fatal." (b) The great majority of the deaths from chloroform have been in the earliest stage, before the operation for which its use was required has even commenced. Very many have been before sensation has been abolished. There has been therefore an intolerance — a repudiation—of the vapour at the very commencement.

Unless a certain degree of free dilution be commenced with, and preserved throughout the whole inhalation, it is pre-eminently necessary to endeavour to induce a tolerance at the earliest stages. Chloroform vapour, in a very marked manner, by its action on the system, produces a tolerance of itself. After the inspiration of a weak atmosphere for some time, a more concentrated one is respired with ease, whereas this last breathed at first would give rise to coughing and all the phenomena of resistance. In this respect the effects of chloroform-vapour bear a striking analogy with those of vitiated air. This is as true of the remote effects of chloroform as of its proximate effects. Patients who have been accustomed to inhale the vapour frequently become tolerant of a more highly concentrated atmosphere than others.

From the foregoing considerations, it seems to me that any lax method of exhibiting chloroform should be thrown aside. One of two plans should be adopted—either a certain definite proportion of chloroform-vapour, mixed with atmospheric air, should be inhaled throughout the entire process, and this proportion should never exceed 5 per cent.; or else a very gradually-increasing proportion should be admitted to the lungs, so that a tolerance may be induced, and the nearer this approaches to a mathematical gradation the better.

The only certain plan of giving a mixture of chloroform with atmospheric air which shall contain a definite proportion of each is that practised by Mr. Clover. A large india-rubber bag is filled with a mixture of chloroform-vapour and air, the proportion being four or four and a-half to a hundred. To prepare this mixture, Mr. Clover places the weight of chloroform capable of producing the bulk of vapour required by the contents of the bag into a metallic reservoir, the temperature of which is elevated by means of warm water. The india-rubber bag being attached to the tubular end of the reservoir, a pair of small bellows is applied to the other end, and air, which of course takes up the chloroform in its passage, is blown into it. This method fulfils all the indications for safety in the employment of chloroform, whether these indications be derived from the practical experience we have had before us, or from the analogical data of experiment. Mr. Clover has written thus to me:—"I have found my inhaler produce the anæsthesia more uniformly than I have been able to effect by any other means. Patients very rarely cough or make any manifestation of the vapour being too pungent. A large majority of the patients are prepared for the commencement of the operation in less than six minutes, and they certainly recover from the effects of the chloroform more readily, and with less sickness and prostration than I have observed when I did not make use of the inhaler." The objections to its universal employment are practical ones. It cannot be prepared for use in a moment, the arrangement is more bulky than can be conveniently carried about, and is too expensive for every Practitioner to provide himself with. It is especially useful where patients are assembled together, as at an Hospital on an operating-day. I think the objection to this method can be summed up in one sentence,—it cannot be universal.

Dr. Snow's instrument, though not with the mathematical certainty of the fore-mentioned method, provided against the administration of a proportion of chloroform vapour higher than 5 per cent. Moreover, it had an arrangement for diminishing and increasing the proportion; it therefore aimed (1) at the production of a tolerance, (2) at the maintenance of a definite atmosphere. But I consider that it is desirable to make the dilution at the earlier stages greater than is accomplishable by Dr. Snow's instrument. A definite progression should govern the earliest stages—from a mere taste of chloroform to an atmosphere of 2 or 3 per cent.; and coughing should never occur. I have endeavoured to construct an instrument which shall provide for this gradual decrease of dilation, and shall have the advantage of portability; for even Dr. Snow's is complained of from its cumbrousness; people prefer an instrument which they can carry in their pocket to one which they have to take under their arm.

The instrument, which I have now used a large number of times, and which is figured below, has the advantage of great portability, and is provided with an arrangement for perfect dilution, as well as very gradual increase in the proportion of chloroform. It is provided with Sibson's mouthpiece in like manner as Dr. Snow's instrument is.

A is a hollow cylinder, the receptacle of the liquid chloroform, which is poured on crumpled blotting-paper, placed in its interior. It is composed of a basis of gutta-percha, with a metallic lining and covering. The object of the interstratum of gutta-percha is to preserve an equality of temperature, and to prevent the warmth of the hand in holding the instrument from being conducted too rapidly to the chloroform. To do away with any cumbrous flexible tube, I made the following arrangement:—The metallic tube conducting from the chloroform chamber was bent at a right angle; at its horizontal part B was a telescope-joint, so that its upright portion with the attached mouthpiece might be made to revolve. The mouthpiece also fitting into the open extremity of the conducting tube in any position, the instrument could be adapted to every movement of the patient, and yet the chloroform-containing cylinder be continually upright.

(a) "On the Teeth," p. 252.

(b) Table of fatal cases, by Dr. Warren, U.S., p. 23.

FIG. 1.

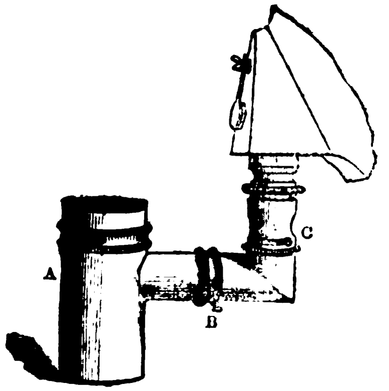
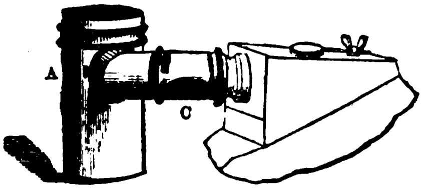


FIG. 2.



This may be understood from the figures. In Fig. 1 the instrument is adapted for a patient in the sitting position. By turning down the mouthpiece, etc., upon the joint at B., and rotating slightly the mouthpiece, the arrangement becomes, as in Fig. 2, for the recumbent posture. Any alteration of position is easily followed by the instrument, and the cylinder can be turned to one side or the other to be out of the way of the operator. At C is an arrangement for admitting, or gradually excluding air; this consists of two tubes, one fitting over the other; both are perforated by two holes, but by turning round the outside tube these can be gradually closed.

To use the instrument, place a piece of crumpled blotting-paper so as nearly to fill the cylinder, and let a small piece lie along the horizontal part of the efferent tube; arrange the position, and introduce a drachm and a-half of chloroform. Let the arrangement at C be so that air shall freely enter at the apertures, and let the valve of the face-piece be turned away from the hole. The patient now gets but a slight taste of chloroform. After a few inspirations turn the outer tube at C, so as to cut off some of the laterally-admitted air. After a few more, this perforated tube may, by the turning of the outer, be converted into a closed one. Adopting these means I find that the coughing, the voluntary resistance, the struggling of the early stages are completely done away with. The valve of the face-piece is then gradually moved over its aperture in the usual manner, and the patient breathes an atmosphere of between four and five per cent. Throughout the whole process, therefore, there is a gradual increase in strength of the atmosphere inhaled. (c) · My experience is that when this is performed, not only do the early symptoms of induced anæsthesia come on in a quiet and gradual manner, but even the stage of involuntary muscular excitement is reduced to a minimum.

I consider that one size only of face-piece is required; for I do not think it advisable to use an inhaler in the case of children. In the first place their breathing is so spasmodic and irregular as almost to annul the good attained, and, in the second, chloroform has proved itself so safe to young children that I think it no risk to use the napkin or handkerchief.

(To be continued.)

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

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HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

EMPYEMA ALBUMINURIA—PARACENTESIS—DEATH—AUTOPSY.

(Under the care of Dr. PEACOCK.)

[Reported by Mr. LANCHESTER.]

WM. H. Y., aged 38, a large-made, stout man, with sallow, muddy complexion.

August 9, 1862.—Respiration hurried and shallow (36). Has some cough and muco-purulent expectoration, but has never raised any blood. The skin is warm and soft. Pulse 120, but of fair volume, and soft. Tongue with thin white fur, rather dry. Appetite good. Bowels regular. Urine sp. gr. 1012; alkaline reaction; containing some lithates; also slight opacity with nitric acid and heat, and with heat alone. He sleeps well, and complains of no pain.

Physical Signs.—The dimensions of the chest are 19 inches on both sides just above the mamma. At one inch below the mamma on the right side 18⅜ inches, on the left 17⅞ inches. There is impaired expansion of the right side, and dulness on percussion over the whole side. Respiration somewhat tubular at the apex, becoming feebler towards the mamma, and being quite lost inferiorly both in front and behind. Voice distant below. Vocal fremitus quite annulled. On the right side the resonance on percussion is good. Respiration somewhat harsh at the apex. Heart beating in epigastrium; sounds normal.

History.—He is a drayman, and has been in the habit of drinking several pints of porter a-day and some spirits. He has had good health until seven weeks ago, when his breathing became bad, and he was told he had bronchitis. He had no pain in the side, and not much cough. The breathing has been gradually getting worse until the present time. He states that he once had bronchitis before, ten months ago, but has had no other illnesses.

Ordered ℞ Calomel, gr.j.; P. Doveri, gr.iv.; H. pil. nocte maneque s. ℞ Potassi iodidi, gr.iij.; sp. æth. nitr., ʒss.; ex. decoct. cinchonæ, ter die.

12th.—Much the same. Respiration hurried. Pulse 120. Tongue covered by a thin fur, moist. Appetite good. Bowels open twice a-day.

15th.—It was determined to perform the operation of paracentesis. A trocar was introduced for that purpose in the lower lateral region, but without effect. To continue the medicine.

19th.—Expresses himself as feeling much the same. The wound of the trocar is nearly healed. Teeth not at all sore, but there is a slight red line along the gums. To discontinue the pills. The pulse 120, soft, of fair volume. Tongue clean. Appetite good. Bowels open. Respiration hurried. Has some cough, and expectorates frothy mucus.

20th.—Mr. Hilton introduced a trocar in the postero-lateral region, and drew off two pints of thin blood-coloured serous fluid. Some air was sucked in during the operation, owing to the patient drawing occasional long breaths. The wound was afterwards closed in the usual manner. The fluid withdrawn had a specific gravity of 1011, and contained half albumen.

[I left town the next day. On my return (September 10) I found that the man had progressed favourably after the operation, but latterly his general health had been getting worse. The following note was taken on the 12th.]

September 12.—Chest much rounded, particularly on the right side, with morbidly clear resonance above the mamma. Dulness on percussion low down in the right lateral and posterior regions. Great effort, but scarcely any movement of the right side. Respiratory sounds audible all over the right side, except in the lower lateral and posterior regions; but only feebly heard below. Heart sounds noisy, action tumultuous, and some pulsation above the clavicles in the jugulars. Eyes glassy and pale. Extremities livid. Pulse very feeble. Liver extended considerably into the abdomen, and over to the left side. Abdomen tumid. Some œdema of the lower extremities. He states that he passes a full quantity of urine. Complains of pain in the lower part of the left side, where there is dulness and some crepitation, probably pleural.

(c) The instrument is made by Matthews, of Portugal-street.

17th.—Much the same; respiration much hurried; coughs and expectorates jelly-like mucus; pulse feeble, irregular; appetite falling off; bowels open; urine, sp. gr. 1030, alkaline, containing lithates and some albumen; under the microscope are seen some small casts. He has lost six pounds in weight since admission.

18th.—Was, at his own request, allowed to return home, and made an out-patient. After reaching home he walked in his garden for a time; on returning his breathing was much oppressed, and he died shortly after.

Autopsy, Thirty-six Hours after Death.—Body well nourished; some œdema of the lower extremities; abdomen containing some fluid; post-mortem rigidity fair; costal cartilages partly ossified. On raising the sternum the right pleura was found thickened and adherent to it. On cutting through this some air escaped with hissing noise from the right pleural sac, and this was seen to be nearly filled with sero-purulent fluid having an offensive odour. The fluid being removed, the pleura (costal and pulmonary) was found thickened and altered in appearance. The lung was compressed to about a third of its normal bulk, and lying against the vertebral column. On section it was firm and carnified, but its substance did not appear altered. The left lung was somewhat firmly adherent in all its extent to the thoracic wall. Its substance was soft, and on section very œdematous everywhere. No tubercle in either lung; pericardium normal; heart wasted, flabby (weight, probably eight to nine ounces); right side dilated; foramen ovale closed; valves healthy; left cavities normal; mitral valves somewhat thickened; aortic valves slightly atheromatous. The aorta was atheromatous at its commencement. Pulmonary artery healthy. Liver: both lobes much enlarged, their lower margin being on a level with the umbilicus; its capsule somewhat thickened, and on section there was some hepatic congestion. The gall-bladder contained thin yellow bile; its ducts were normal. Spleen, six ounces, very soft. Kidneys (probable weight five to six ounces): the capsules were somewhat adherent; on section the pyramids were distinct and congested, but cortical substance wasted; the whole much congested; tubuli uriniferi apparently normal under the microscope. Supra-renal capsules on section appeared hollow, the medullary matter being soft and broken down.

CASE OF EMPYEMA—PARACENTESIS—CURE.

(Under the care of Dr. EDWARDS.)

[Reported by Mr. H. S. Lanchester, Resident Medical Officer.]

Henry S., aged 46, a letter-carrier, was admitted July 26, 1861. He stated that he had always had good health up to April 13 last, when he caught cold, and was taken with acute pain in the left side. For this he kept at home, and was attended by a Medical man until he got somewhat better. He was not, however, able to resume his work, and latterly, he said, he had been again getting worse, having a cough and increasing dyspnœa.

At the time of admission his condition was as follows:—He is an emaciated man, of originally a somewhat stout build. His complexion is very sallow, almost icteric. Expression distressed; respiration much hurried. He has a troublesome cough, but not much expectoration. Skin soft; pulse 110, rather feeble; tongue furred; appetite indifferent; bowels regular; urine normal. He sleeps fairly; the decubitus is on the left side. The physical signs show considerable enlargement of the lower part of the left side, and bulging of the intercostal spaces, and there is impaired movement of this side. There is complete dulness below the third intercostal space anteriorly, and about the same level laterally and behind. The respiration is distant above, and quite absent inferiorly. Vocal vibration is absent. Respiration puerile on the right side. Heart pushed over to the right side, and felt beating in the epigastrium.

He was ordered to keep in bed, and to have mixed diet and wine ℥x. A blister was applied to the side, and effervescing mixture with chloric ether was prescribed.

The dyspnœa appeared somewhat relieved by the blister, and the cough also improved. On August 10 the note states that his general health was much improved. The tongue was clean and the appetite good. The enlargement of the side appeared more circumscribed, and the dulness to percussion did not extend so high. He was ordered five grains of iodide of potassium and half a drachm of sal volatile in camphor mixture. To continue his wine and mixed diet.

August 23.—Since the last note a circumscribed swelling has been gradually forming in the lower lateral region rather at its anterior edge. To-day it was considered advisable to puncture it, and accordingly a trocar was introduced, and about two pints of well-formed pus, not fœtid, were let out.

25th.—The wound has discharged very freely since the operation; the pus of same character. The general health continues good.

27th—Discharge beginning to diminish.

September 8.—Wound still discharges slightly. The cough is quiet, and he has no expectoration. Skin cool; pulse rather quick but soft; tongue clean; appetite good. Physical signs show retraction of the left side. Dulness below angle of scapula. Respiration distant, but air enters in forced inspiration. A friction sound in the lateral region (?).

13th.—Wound still discharging pus.

23rd.—For the last few days but little discharge, and this of thin, watery character. General health excellent.

27th.—Wound ceased to discharge.

October 18.—There has been no return of discharge since the last note. He has gained weight (5 lbs. since August 12) and says he feels quite well, except for some shortness of breath after any exertion.

Physical Signs.—There is considerable retraction of the left side, with drooping of the shoulder, and tilting out of the angle of the scapula. Impaired resonance below the third rib, becoming dulness inferiorly, and air entering the lower part but feebly. Heart in same position.

October 25.—Discharged greatly relieved.

March 13, 1863.—He has had very good health ever since he went out, and has been following his employment of letter-carrier without intermission; has only to complain of shortness of breath when he moves too quickly. The right side of the chest looks larger than the left, and moves more freely; the left shoulder droops, and the angle of the scapula is tilted up, and approaches the spine nearer than that of the opposite side. Resonance over the whole left lung a little impaired, the other side being somewhat hyper-resonant; air enters the left lung everywhere, though the respiration is more feeble in this than the opposite lung, in which it is puerile; vocal fremitus weak, but to be felt on both sides. Heart beating just below mamma in about its normal position.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

UNILATERAL CHOREA—INTERSTITIAL KERATITIS—SLOW RECOVERY UNDER THE USE OF IODIDE OF POTASSIUM.

(Under the care of Dr. HUGHLINGS JACKSON.)

Sarah P., aged 12. This patient came under my care in October, 1861, at the Royal London Ophthalmic Hospital, when Clinical Assistant to Mr. Poland, and afterwards at the Hospital for the Epileptic and Paralysed. The evidence of syphilis was mainly the malformation of the teeth (described by Mr. Hutchinson), and the keratitis; the only other evidence was, that when a baby she had snuffles very badly. When I saw her she had had chorea on one side of the body for more than a year. It was on the right side only, face, arm, and leg; it began by pains in the right arm and leg; it had been worse, but had never extended to the other side. She had been treated on the idea that the affection of the eyes was a strumous one; the treatment adopted was by iodide of potassium. She recovered, but slowly, and did not get quite well for some months, but ultimately got rid both of the keratitis and of the chorea.

It is well known that chorea sometimes affects only one side of the body, and that very often the disease affects one side more than the other; still, when chorea lasts for more than a year, *entirely* limited to one side, and when there are accompanying evidences of syphilis, I think there are fair grounds for a suspicion of some local disease due to the syphilis. I have of course seen many cases in which the movements were quite limited to one side—face, arm, and leg—and in which the history and general bearing of the patient was like that of ordinary chorea, with no history of syphilis; but in these, as well as in cases of epilepsy (epileptiform convulsions) affecting one side, I suspect that there is some local disease of the opposite side of the nervous system, although not syphilitic.

BIRMINGHAM GENERAL HOSPITAL.

SYPHILITIC AFFECTIONS OF THE NERVOUS SYSTEM.

[Communicated by Dr. RUSSELL, Physician to the Hospital.]

1.—*Syphilitic Ulcers of Trunk and Leg—Nine Months afterwards Fixed Pain in Head—Vomiting—Vertigo—Mental Dulness—Rapid Cure by Iodide of Potassium.*

Samuel W., aged 30, admitted September 1, 1860. He was an in-patient of the Hospital twelve months ago, with an extensive syphilitic ulceration, occupying the integument of the left side of the thorax, and a second ulceration of the same character over the left tibia. He was not salivated, but recovered perfectly under large doses of iodide of potassium. Unfortunately no record has been preserved of the date of the primary infection, nor of secondary manifestations.

Three months since he began to suffer from severe aching across the forehead, but chiefly over the eyes; for the first two or three weeks after its commencement he had occasional vomiting, usually immediately after his breakfast; this symptom disappeared entirely at the end of three weeks. The pain in the forehead "never ceased for an hour," but has become more severe; it "sometimes made his eyes misty," and was frequently attended with vertigo. In consequence of the latter symptom he was always led down stairs, though he could ascend easily. He has had a discharge from the right ear for some years, at first with pain.

When admitted he complained of the pain mentioned above, placing his finger over the median line of the forehead as the seat of chief intensity. He had no vertigo, but staggered somewhat in walking. He was remarkably dull and inert, replied tardily, as though his memory was not very ready, and was not inclined to enter into conversation, lying very quiet through the day. The expression of his face was unintelligent, but his intellect was entire. It was fancied that there was some incompleteness in his articulation, and that he used the right side of the mouth more freely than the left, though he pursed his lips completely. With this exception, he did not present any evidence of paralysis, neither in any of the facial nor ocular muscles, nor in any part of his body. The tongue was protruded normally. His pupils were natural.

The scalp was free from tenderness, and the pericranium from thickening. There were no cicatrices in the throat. A cicatrix existed in the right groin, and a small pitted scar on the penis at the reflection of the mucous membrane upon the prepuce. A very extensive, irregularly-shaped cicatrix, entirely unadherent, existed on the left side of the thorax between the nipple and the lower edge of the ribs; a second, about six inches in length, over the left tibia; this also was quite unadherent to the bone, but the latter was decidedly enlarged. The opposite leg was healthy. A third scar, with a very irregular margin and depressed surface, the size of a split horse bean, was observed on the right ala nasi, at its junction with the cheek; the sore which occasioned this scar occurred at the same time with those already mentioned.

The patient was well made and muscular.

He was at once ordered five grains of iodide of potassium three times in the day, in decoction of cinchona. At the end of a week he had undergone marked improvement; the aspect of his face had become clearer, he was more lively, and his pain was much relieved. By the 11th, the headache had nearly left him, though he had still a dull manner in talking.

On the 27th, a seton was inserted in the neck, and the same medicine was continued.

On January 7th, he was discharged apparently cured. In the following November, his wife applied for dressing for the seton, and reported that her husband continued well.

2.—*Dissipated Husband—No Primary Symptoms—Sore Throat with Ulcers on Legs and Arms Ten Years Ago—Continued Ulceration of Syphilitic Character—Fixed Pain in Head and Vertigo for Two Years—Emaciation.*

M. A. T., aged 44, married. She has had two children, the last prematurely, fourteen years ago; she has not been again pregnant. Ten years ago she suffered from an ulcer over the crest of each tibia, and over the olecranon process of each ulna. About the same time she also became affected with sore throat. Her throat soon recovered; the ulcer on the left leg healed after two years' treatment; that on the opposite leg has never been completely cured. Two years ago she began to suffer from pain in the head and vertigo, and these symptoms have continued with increasing severity ever since. At that time also menstruation became irregular and infrequent, and of late has not occurred more frequently than once in six months. Lately she has found that her hair was disposed to fall off, and that what remained became more dry and grizzled; she has also experienced a very offensive smell originating in her nose, but without discharge; nor has she at any time parted with bone through her nostrils. The patient has never had any eruption upon her body, nor is she aware of having had sores in her genitals, though, from her husband's character, she considers it very probable that she has been infected.

She applied at the Hospital as an out patient. Her principal complaint was of fits of severe vertigo, coming on twice or thrice in the day, lasting two or three minutes, and obliging her to sit down on the instant, or she would fall. She never entirely lost consciousness in the attacks, but "things swim round," and afterwards she felt sick, but neither slept nor felt heavy. A sense of rushing to the head, and of pressure on the back part preceded the attacks. She also complained of the pain in the head, mentioned above, which had increased in severity, and was of a shooting character; it was worse at night; the pain has been seated throughout on the left side of the head, over a very wide extent, as described by the patient. She indicated by her finger a limited space, just at the highest point of the left squamous suture, as the seat of tenderness, but with this exception the scalp and pericranium were healthy.

She was tall, pallid, and thin. She had undergone much anxiety through the misconduct of her husband several years ago, but none of late. Her hair was abundant, but remarkably dry, coarse, and grizzled. Traces of former ulcers were visible upon her tonsils. Two ulcers existed upon the right leg, one nearly oval, over the apex of the patella; the other, larger and more irregular, over the tuberosity of the tibia; the surrounding skin was thickened, but not adherent to the bone. Cicatrices of two ulcers, corresponding in all respects with those described, were observed upon the opposite leg. The tibiæ were healthy; the nasal bones also were free from disease. She presented no symptoms of indigestion, excepting that her bowels were constipated, but she had emaciated. The sounds of her heart were healthy, though feeble. Her urine was free from albumen, and was found healthy when examined by the microscope.

She continued under treatment for four months. The ulcers on the leg underwent little amendment, but the fits of giddiness became less frequent, though they continued to recur at uncertain intervals of a week or a fortnight, and always with symptoms of much urgency. Moreover, she still complained of the pain in the head.

The treatment consisted of iodide of potassium in combination with the citrate of iron, and subsequently with the syrup of the iodide of iron, the dose of the iodide of potassium in the latter combination being raised to seven grains. For the first three weeks, cod-liver oil was also prescribed. Near the end of the second month the bichloride of mercury, in doses gradually raised to one-fifth of a grain, with decoction of bark, was substituted. Black wash was applied to the ulcers.

3.—*Impure Connexion—Four Months afterwards Secondary Eruption—Fixed Pain in Head—Ulcers of Tonsils—Ophthalmia—Imperfectly Relieved by Antisyphilitics—Relapse with Iritis.*

E. H., aged 24, single. With some difficulty she was induced to admit having been the subject of sexual intercourse on two occasions, the former three years before admission, the latter four months; in the last case only was there evidence of infection; she then had a discharge, with painful micturition. At that time her gums were affected by medicine.

On entering the Hospital the patient complained of pain in her head, and in her right side; her appetite had entirely left her, and her tongue was coated with a remarkably thick fur. At the end of a fortnight, however, the pain in the head had assumed much greater severity; it was constant, and prevented her from sleeping. It occupied the region of the sagittal suture, extending for some distance on either side of that line. The scalp was tender, but quite free from puffiness; the pain was aggravated by moving the head.

At this period of her case an eruption, of unquestionably syphilitic character, made its appearance over the chest, neck, and arms, and a patch of grey ulceration was discovered on each tonsil, and on the right posterior pillar of the fauces. The tibiæ were healthy. The patient was well nourished, and free from all appearance of cachexia. Her chest was healthy. She continued under observation during five months. Through that period her progress was unsatisfactory; at its termination a considerable ulcer remained on each tonsil, and the eruption, though it had much diminished, was far from having disappeared. The pain remained fixed in the same part of the head; it underwent no amendment for two months; it then intermitted, but continued to recur so long as she remained in the Hospital. She also suffered from two attacks of ophthalmia, the iris remaining unaffected on each occasion. Her menstrual functions had always been performed naturally, but whilst in the Hospital she was attacked with flooding, and had epistaxis on two or three occasions.

The treatment consisted, at first, of iodide of potassium, which afforded some relief to the pain, but in three days produced severe iodism. She subsequently took blue pill, and afterwards calomel, in moderate doses, alone, and in combination with nitric acid and with quinine, but without affecting her gums, although the administration of the mercury was continued for a month. Afterwards, iodide of iron and the shower bath were prescribed.

Four months after having left the Hospital, the patient returned with renewal of the pain in her head, and with the history of a fresh attack of inflammation in the eye, which had left the iris irregular and partially fixed. We speedily lost sight of her.

4.—*Chancre with Bubo Nine Years Ago—Without Bubo Nine Months Ago—Ulcer of Leg—Pain in Head—Sudden Imperfect Paralysis of Speech, Right Cheek, and Arm—Failure of Memory, and Somnolence.*

John G., aged 35, single, hawker. The patient had chancre in the East Indies eight or nine years ago; it remained open about ten weeks; at the same time he had a suppurating bubo in his groin; he was salivated on this occasion. He had a "slight running" four years ago, which only lasted a fortnight, and nine months ago he again had chancre without any affection of the glands. On this occasion the sore was open for three weeks; he simply "took a bottle of medicine." Two or three months after the chancre, an ulcer broke out on the left leg, and did not heal for six or eight weeks; with this exception he has not presented any secondary symptoms. He was intemperate at one time whilst steward of a steam-packet, but not for two or three years. He suffered from cholera in Ceylon, and fourteen years ago had fever when at home in this town. He has had no other illnesses of any kind.

During the last two months he has complained of some pain in the back of his head. On the 7th of the present month, three days before his admission, being in his usual health, he suddenly became unable to speak; this occurred just as he was going to bed; at the same time he found that muscular power had become impaired in his right upper extremity, so that he could not hold his candlestick, and the hand felt numbed; the lower extremity was quite unaffected. He was giddy, but consciousness was unimpaired. The following morning his power of articulation was reduced to its condition at his coming under our observation; the grasp of his hand, however, was somewhat recovered, but the three outer fingers still felt numbed. He had considerable pain in the right side of the forehead and in the occipital region.

When admitted, April 10, he was noted to have the aspect of health. The right cheek was pendulous, causing very manifest deformity of the face; he could not fully purse up the right side of his mouth. He closed the right eye completely, but a tremulous movement remained in the lids. The right masseter contracted very slightly, but the right temporal fully. The tongue was protruded in a direct line; all the movements of the eyeball were performed normally. Sensation of the integuments of the face and of the mucous membranes was perfect, so were the senses of vision and of hearing. The pupils were natural.

The grasp of the right hand was more feeble than that of the left, but there was no impairment of sensation in the integuments. The most obvious disturbance of nervous power was manifested by his speech; articulation was so exceedingly imperfect that it was only by the exercise of the greatest patience that the foregoing particulars were obtained. It was necessary that he should repeat many sentences half a dozen times before any approach could be made to their meaning.

His throat was free from cicatrices; a small cicatrix existed on the prepuce, and one in the right groin. A very regularly shaped oval scar was observed on the left leg. The tibiæ were healthy. The scalp was free from tenderness, and the pericranium did not present any thickening.

Ordered to take five grains of blue pill three times a-day, and to have a blister at the back of his neck.

On the 14th salivation commenced. The symptoms had rapidly improved; power of articulation was partially restored; the pain existed only in the region of the right frontal eminence. The grasp of the hand was fully regained, and the numbness of the fingers was nearly removed, but the deformity of the face remained, though he closed his eye more firmly. He was then ordered iodide of potassium, five grains three times in the day; the dose of mercury was reduced, and two days after the mercury was entirely suspended, on the complete establishment of salivation. On the 19th the dose of the iodide was increased to half a scruple.

On the fourteenth day it was noticed that he had more power over the muscles of his face, though the zygomatics did not contract; corrugation of his forehead was symmetrical; the tongue deviated slightly to the right; the soft palate was symmetrical; his speech continued thick. But he then complained of some impairment of memory, and of great tendency to sleep during the day. A seton was inserted in the neck, and five grains of citrate of iron were added to his mixture.

The patient continued under observation for three weeks longer, when he was discharged at his own request. When he left the Hospital his face had nearly recovered its normal mobility, and but little fault could be found with articulation. Evidence of failure of memory, however, increased, and the tendency to sleep during the day became more marked. All the special senses were entire.

After repeated inquiries he remembered that two months before his seizure he had experienced temporarily slight difficulty in talking, but took little notice of the symptom. No other indication of antecedent nervous disease could be obtained.

Change in Disease.—In a speech made by Lord Brougham, after Professor Christison's address at Edinburgh, he said:—"With respect to the remark that diseases change their form in different places and climates, I had a very remarkable instance from my excellent friend Sir William Russell—then Dr. Russell, whom I had formerly known here in Edinburgh. He had gone to India and resided for about 20 years, and was the Physician of the Cholera Hospital. He returned to England with the most entire belief in the Asiatic cholera not being infectious. I was then in office, and I prevailed upon him to take measures for observing the advance of cholera on his way. He went to St. Petersburg with the most absolute conviction of cholera not being infectious, for he had seen in the hospitals of Calcutta men sleeping not only in the same ward but in the same bed with cholera patients without any contagious effects. After remaining there six weeks he came back a complete convert to the doctrine of infection; he said it was infectious to the greatest degree. It was evidently some difference, occasioned by the difference of the climate of Calcutta and that of St. Petersburg."

Death from the Oil of Bitter Almonds.—The newspapers have lately contained an account of an inquest held at Lambeth Workhouse on the body of a cook, who had died through taking the essential oil of bitter almonds. It was supposed she had taken about half a cupful. It is a fact worth noticing, that the woman lived twenty hours after having drank the poison. In most of the fatal cases that have been recorded, death has taken place at a much earlier period; as with prussic acid the person generally dies speedily or recovers.

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MEDICAL TIMES AND GAZETTE.

SATURDAY, OCTOBER 17.

"BLOOD-POISONING."

During the past fortnight or three weeks some excitement has been prevailing in the public mind respecting the deaths of certain children in some of the low courts in Bethnal-green. Inquests have been held, and verdicts have been recorded which have led some of the uninitiated to conclude that at last the Profession had succeeded in the definition of a new malady arising out of the combined influence of bad drainage, bad water, and dirt. A correspondent of one of the daily papers made it his business to visit Bethnal-green, and the columns of the journal referred to were filled day after day with sensation articles relating to the condition of the poor in this unfortunate district. Bethnal-green has thus been in everybody's mind, and Medical men have been daily asked about the "new disease." We also have made it our business to inquire into the alleged facts, and propose now to lay them before our readers, and to give our opinion thereon.

On the 19th September an infant child of a poor shoemaker, named Ward, residing in an attic room at 10, Holly-bush-place, died after nine days' illness. She had been attended by Dr. Moore, the District Medical Officer, who, when the death occurred, applied to the beadle of the parish for an inquest, alleging that he suspected the child had died from bad air, and, on his declining to communicate with the Coroner, applied personally to Mr. Humphreys, and an inquest was held on the 22nd. The evidence taken consisted of the statements of the father and mother of the child and of Dr. Moore. The father stated that he believed the cause of the child's death was the inhalation of an impure atmosphere, arising out of the nuisances in the midst of which the house he lived in was situated. He said (as reported) that there was a cow-shed, where pigs were also kept and slaughtered, within eight yards of his house, that the privies and cesspool opposite the door were offensive, and that the water lodged on the surface of the court until it putrefied. The evidence of Dr. Moore was to much the same effect. Other children had died in the house, and Dr. Moore is reported to have stated that they all, as well as Ward's child, "were suffering from a low state of debility. There was no specific disease." "I told the parents that medicine was utterly useless, unless they were taken away, as they were suffering from the impurity of the air." On post-mortem examination he says he found the brain healthy, "the blood liquid and tarry, the lungs healthy, but gorged with liquid blood, the heart healthy, but the blood in a semi-putrid state. The stomach was healthy, and contained milk, and the liver, intestines, and kidneys all healthy, and no marks of violence on the body. . . . . I attribute the cause of death to blood-poisoning through the inhalation of impure air. I have not had time to test the blood as to the gases it contained, but from its fluidity I consider that the gas was hydrosulphate of ammonia. It is my firm belief that the other children died from the same cause." Dr. Moore is reported further to have said that "when he held the unpaid office of Sanitary Inspector three years ago the parish authorities complained and got rid of him on the ground that they would not be continually troubled by his reports on the sanitary condition of the parish." The verdict ran as follows:—"That the deceased came to her death by blood-poisoning, caused by the impure state of the atmosphere, and they were of opinion that the Sanitary Inspector had been guilty of great neglect of duty in not seeing to the court in question sooner, and requested the Coroner to write to the parish authorities to that effect."

In the absence of more definite information as to the symptoms presented by the children that died, it is impossible to criticise Dr. Moore's conclusion. It is true that there is a rumour that some of the children suffered from scarlet fever, but if it be the fact that the court was at the time of their illness in the condition described, the deaths may fairly be regarded as resulting, in part at least, from the impurity of the atmosphere. At the time of our visit, towards the end of last week, the court was undergoing the necessary improvements. The cesspool, situated about fifty feet from the house, was filled up, the privies panned and trapped, and the house was being lime-whited. Still there was much remaining to be done. The court was uneven, unpaved, and therefore wet and malarious, and the cow-shed mentioned, which was situated, not eight yards, but fifty-six feet from the house, and at the opposite side of the court, was offensive, badly paved and badly ventilated, crowded, and dirty. The water supply for the court was very defective also, and water was not even going to be laid on to the privies. The house itself in which the Wards reside was formerly a suburban inn; the rooms, though low-pitched, are very large, and the staircase wide and airy. The ventilation is as thorough as windows on both sides of the rooms can make it, and we could observe no nuisance in the rear of the house. The attic occupied by the Wards is very dirty indeed, and evidently had not been lime-whited for many years, and the floor was begrimed with the encrusted dirt of at least an equal period. Still the ventilation here, too, was as good as could be desired, although we can readily understand how the effluvia from the cow-house, etc., should enter the room when the window on that side of the room is opened.

Since the occurrences just described, three other inquests have been held, in respect of the deaths of the children of a weaver named Rogers, residing at 19, Thorold-square. The first of these was held upon George Rogers, aged 12 years, at the London Hospital. From the evidence of the resident Medical officer, the child was admitted suffering from uræmic convulsions, and the jury accordingly returned as their verdict, "Death from poisoning of the blood arising from disease of the kidneys." Subsequently to this an inquest was held upon Eliza and Kate Rogers, aged respectively 14 months and 13 years. Altogether it appears that Rogers had lost five of his children within five weeks. From what we can gather these at least were cases of scarlet fever. Mr. Gay made a post-mortem examination of one of them, and, as he has favoured us with his MS. notes of the appearances, etc., we prefer using them to repeating the meagre account published in the daily papers. "This body, where it was blood-stained, was of a deep purplish hue, elsewhere remarkably pallid. The muscles moderately rigid, and the eyes sunken. The fat and muscles were tolerably well developed, but very pale. The jugular and superior thyroidal veins were very much distended with dark, uncoagulated blood, very nearly, but perhaps not quite decidedly pitchy in its character. Curiously, the venæ innominatæ were not so distended, and the superior cava with the auricle almost empty, as was indeed the whole heart.

This organ was flabby, and the endocardium appeared simply as though it had been washed with the blood, while a little had remained here and there, but more especially amongst the carneæ columnæ and chordæ tendineæ. There was not the slightest appearance of clot in any part of the body or in any of the vessels. The lungs were healthy, but anæmic, excepting a small portion of the left lower lobe, which was congested. No fluid in the pericardium or pleuræ. The peritoneal cavity, as well as the tissues generally, filled with serum, the former to distension; the peritoneum itself had a slight blush of redness throughout. The stomach, spleen, and intestines healthy. The kidneys congested. The bladder contained urine that coagulated by heat." Mr. Gay made a survey of the houses. He gave in evidence, as reported, that the child he examined died of blood disease for the want of sanitary measures. He informs us, in explanation of this, that of course "he could give no opinion as to the nature of the disease. The gentleman who attended the children said it was scarlatina, and he could not question his opinion as to its nature. They had been sickly for some time, and were attacked with urgent vomiting, but no diarrhœa; had some exanthematous eruption, convulsions, and ultimately ascites and anasarca." "I could not undertake to say," he adds, "it was or was not scarlatina, but I could undertake to say that it was blood poison, and that the condition of the square and its habitations, their dirt and impurities, had acted as the poison, slowly at first, rapidly at last." Here at any rate was a distinguished and independent opinion. We all know how banefully scarlet fever is influenced by unsanitary conditions such as were present, and, as we write, are still existent in Thorold-square. The state was certainly very much worse than that of Hollybush-lane when we saw it. We were accompanied in our visit by the Medical Officer of Health and the Surveyor to the vestry, who kindly pointed out all that we desired to see. The houses generally are badly constructed for ventilation, the basement floors being also about two feet below the level of the surface of the square. This surface is unpaved, undrained, and miry, and contains two uncovered dust-bins, and there is a pump in the centre. There is a cow-shed on one side. In the rear of most of the houses are privies with full and overflowing cesspools, but some, among which is No. 19, has a panned privy, situated close to the door of the house, communicating with a drain, but not supplied with water, and the inlets to the drains are untrapped. The only trap is at the point of communication with the main drain of the square (a 9-inch pipe), which receives the overflow water from the cesspools, and what gets to it of the surface water of the area of the square. But the most gross deficiency here is the lack of water. The pump in the centre furnishes the only source of supply, excepting two or three houses, which have their own supply. It is connected with a tank underground, which, until lately, had not been cleansed for several years, notwithstanding that it was merely covered with boards and earth. One is not surprised, then, to hear that its quality is execrable, and that when it was cleansed large quantities of mud and filth were removed. But even this is not all, for we were informed by one of the inhabitants that it has been customary to chain up the handle of the pump, except for a couple of hours in the middle of the day, and, even when it has been free, the machinery has been frequently so much out of order that for long periods together no water at all could be obtained. Much of this came out in evidence before the Coroner. The verdict delivered by the jury in the case of the child that died at the London Hospital was—"Death from poisoning of the blood, arising from disease of the kidneys," and in that of the other two children —"That the deceased, being children of a tender age, died from the mortal effects of blood disease, accelerated by want of water and sanitary measures in the district of Thorold-square."

After completing our inspection of these two places, we accompanied Mr. Pearce, the Health Officer, in a few of his official visits. The visits originated in complaints which had been made in respect to the stopping up of panned privies and drains in certain low courts issuing out of a street called Priors Mount. The original construction of these courts is radically bad, but this is a fault which no local authority can remedy. They are built upon the land which probably was at one period the back gardens of the houses in Priors Mount, and are arrived at by passing under narrow archways leading out of the main street. What we are about to say, however, does not relate to these courts alone, for the fault exists equally in the houses of Priors Mount itself. In respect, then, of every house and court we examined, we must say that, although we have seen conditions as bad, we have rarely seen anything much worse. As a rule, the courts are wet, muddy, unpaved, and malarious; the houses filthy and unventilated; and the privies either open cesspools or panned, without water supply, drains untrapped, and the dust and refuse lying in a heap, so as to be blown about the court by every gust of wind. In some there was a great deficiency of water; in others, the water was running constantly to waste, no receptacles for it being provided at all. Pig keeping is in some places apparently permitted, even in densely-populated localities. After Mr. Pearce left us, we visited some other courts at another part of the parish, and found their state much the same as those in the rear of Priors Mount.

And now for a few comments upon all this.

1. We must say that we are delighted to find that deaths accelerated by the neglect of sanitary measures are becoming recognised by our metropolitan Coroners. No one acquainted with the working of the Local Management Act can doubt that much good will result from proceedings such as those we have thought it our duty to chronicle. They will show local authorities, who, from various causes, are often slow and timid in carrying into effect the powers with which they are entrusted, that in future they will not have their own way in everything—that they are not responsible merely to the ratepayers who send them to manage their parochial affairs, but that they will be held answerable to the Crown also for neglect of their duty, whenever, as in the instance mentioned, this negligence results in any degree in the loss of a subject. There is not a Health Officer in London but could point his finger every year at hundreds of deaths recorded by the district registrars if not caused, at any rate accelerated, by unsanitary conditions in and about the residences the individuals have occupied, or the workshops in which they have passed the day. About the truth of this allegation no doubt whatever can rest. And such cases are as fairly subjects for Crown inquiries as are deaths from negligence of other kinds. The inquiries upon the deaths in Bethnal-green have already been preceded by an inquest in Islington upon an unvaccinated child who died of small-pox, and by that upon the unhappy workwoman in St. James's, Westminster, which is in the recollection of our readers. Dr. Lankester, then, has the credit of opening this new branch of Crown inquiry.

2. Dr. Moore has been blamed for exceeding his duty by requesting Mr. Humphreys to hold an inquest in respect of Ward's child. We do not think there was any such excess of duty. He felt that his efforts as a parochial Medical officer were fruitless in arresting disease in a locality where a chronic malaria imparted to it a fatal character, and that thus there was an accelerating cause of death which it was the part of the Coroner to recognise. Whether or not this gentleman had previously complained in vain to the parochial authorities is a matter which we cannot discover; the statements on this head are contradictory.

3. The term "blood poisoning," as used to a popular assembly, is open to misconception. The operation of poisons through the blood is a doctrine with which we, as Medical men, are familiar, but the uninstructed public are not to be supposed to be equally familiar with it. Hence, when it is

used, as in the instances before us, they run away with the notion that it is a special disease from some one cause, and, in this case, from the operation of cesspool and drain emanations. It is useless for a Medical man to explain that disease of the kidneys may produce blood poisoning from within; they keep to their idea that its cause must necessarily be from without. For a long time we may now expect them to associate the term with unsanitary conditions; and although they may often be correct, we know how frequently they will be wrong. It would have been better, we think, to have told the jury distinctly that the system of the patient suffered from contamination with the poison of scarlet fever, with the matters which should have been excreted by the kidneys, or with the cesspool and drain emanations, or with two or more of these causes combined.

4. We sincerely hope that these investigations by the Coroner will stir up the vestry of Bethnal-green, and some other vestries that we could name, to something like energetic action. It appears from the inquiries that we have made that the sanitary affairs of the parish are conducted in what we must call, if not a slovenly, certainly in a very lukewarm manner. It is there considered no part of the duty of the sanitary officers to initiate inquiry into local causes of disease; they are only expected to act when their attention is called to some nuisance by a distinct complaint lodged in the office. How little the poor are apt to complain of the absence of proper drainage, of cesspools, of their filthy courts and houses is known to every Health Officer. The reasons for this abstinence are manifold, but among the most influential is their ignorance of their rights, of the possibility of improvement, of the place at which to complain, and, above all, a dread of being turned out of their homes by their landlords, and their goods seized for arrears of rent. This latter process of ejectment has already taken place in Thorold-square, in the case of some of the dissatisfied tenants. The remedy is in the hands of the vestry. It is their duty to see that the poor have clean and wholesome places to dwell in, and they have ample power to compel the landlords of poor tenements to make them fit for human habitation. All that is wanted is the will and decision to enforce the law. The vestries should stand as protectors between the poor and their extortionate or unfeeling landlords —complaints should not be waited for. Throughout the parishes a house to house visitation should be made by the Sanitary Officers in neighbourhoods where disease claims the largest number of victims. The fact of a high death-rate in any place is legal warrant enough for this proceeding. In Bethnal-green we can very well understand that we are prescribing a Herculean task. It is probably if not the poorest, yet among the poorest districts in London, and certainly it is one of the most crowded. But this is no reason why the task should not be fairly and honestly commenced. A few courts made wholesome every year, properly paved and drained, supplied house by house with good water, and plenty of it, not only for domestic use, but for the cleansing of properly trapped privies would tell in the long-run upon the health, not to say also the morality of the neighbourhood. Pigs should be driven from their present close proximity to the dwellings of the poor, and the cow-sheds and slaughter-houses should be systematically inspected and amended before the vestry permits them to be licensed. As it is, but little trouble appears to be taken in this matter, unless on distinct complaint. But for all this to be done requires firmness, and certainly more liberality of expenditure than the Vestry of Bethnal-green have at present exhibited. Of necessity, they had to appoint a Medical Officer of Health in 1856, and they made a good selection out of the Practitioners domiciled in the parish; but having appointed him, they should take care that the proper object of his appointment is attained. If the salary which they give that gentleman was intended to deter him from too great activity, we can only say that the miserable stipend of £100 per annum for the sanitary oversight of a population of 105,000 persons, crowded upon 760 acres of land, is exceedingly well calculated to effect that end. Five times that sum would be little enough, and, by the devotion of all his time, the year would not be too long for the work that lies before him. We can only say, as knowing something of this department of Professional labour, that the effect of the treatment that he receives would be to us dispiriting in the extreme. The only assistance he has is, we are told, that of a man who is the driver of the parish fire-engine, who tells the vestry, as it is reported in the *Daily Telegraph*, that he "believes he is the Inspector of Nuisances," and then proceeds to complain that the beadle has forestalled him in one of his perquisites—namely, certain small fees which he has been in the habit of receiving from slaughter-men for forwarding their interests on the day of licensing. When bribery of this kind is winked at by local authorities, it is difficult to see how his sanitary duties, if he really has any, can be properly performed. Perhaps such fees are allowed for in his salary, which, we are informed, lies somewhere between £30 and £40 per annum. The real sanitary work that is done in Bethnal-green, so far as it is done, is carried on by Mr. Pearce, even to the inspection of choked-up privies and drains,—a kind of duty which in no other parish, we believe, is attempted to be laid upon the shoulders of a refined and educated gentleman,—a duty which no other vestry in London would dream of imposing upon anybody above the rank of a bricklayer.

THE WEEK.

THE SCARLET FEVER AT EASTBOURNE.

So great has been the excitement caused by the reports of scarlet fever at Eastbourne, and such the doubts cast upon the integrity of our Medical brethren, who have been accused, by implication, of attempting to explain away facts which might damage the reputation of this town, that we thought it a duty to the public and to the Profession to dispatch an experienced Physician, one of the seniors amongst the Medical Officers of Health of London, as a "special commissioner" to the spot, to ascertain the exact truth of the case. That gentleman's Report will be found in another page. It appears fully to establish the following points:—Eastbourne has all the capabilities of a healthy residence, including a good supply of pure water. Scarlet fever was introduced by visitors. It spread in a very small degree amongst the residents, chiefly, it is believed, through the linen which was sent to be washed. Its chief ravages were, as correctly stated by Mr. Jeffery, confined to the visitors. By what means was it enabled so to spread? What was the vehicle of infection? Was it the sewage of the houses in which the disease was present, pent-up for hours in the barrel-drain, and contaminating the beach? Possibly. There are well-established instances of the propagation of infectious fevers by such means. At the same time, scarlatina is very widely prevalent and fatal at present; we hear of it at Shanklin, Gosport, and all over London, and it spreads pertinaciously wherever it gains an entrance, even in houses where the best "sanitary conditions" are found.

BEAVERS OR MEN?

L'Union Médicale tells us that M. Höfer has published in the *Cosmos* a theory that the lacustrine habitations, whose remains have been discovered in Switzerland, were the work not of men but of *beavers*. These animals, says M. Höfer, formerly abounded in the Swiss lakes; the so-called habitations are identical with beaver dams; they are a very short way from the shore; they contain beavers' bones, and not human bones. If weapons of flint, bronze, and iron are found in them, it only shows that these animals were hunted by successive tribes of men which used the weapons in question. M. Höfer, to complete his argument, ought to prove that the dwellers on piles in the Indian Archipelago are beavers, and that the lacustrine people whom Herodotus describes were so too.

"FEMALE MEDICINE."

An advertisement which appeared in the *Times* of last week has not been followed as yet by any additional information which might satisfy the natural curiosity it arouses. It set forth proposals for a Female Medical College, with a list of names, constituting, apparently, a committee for the furtherance of such an institution. We did not notice any Medical titles in the list, nor do we know whether the design is entirely of non-Professional origin; but we must confess to a decided *à priori* repugnance for the proposition, and unless subsequent publicity should be able to divest such a scheme of objectionable characteristics, we believe it would not meet with the approbation of those most qualified to form a judgment on the subject. It must of necessity aim at one of two objects: either that of giving to women the regular and systematic instruction of the Medical student, or that of furnishing them with an "expurgated" edition of Physiology and Medicine, in which, as in the "Bowdlerised" copy of Shakespeare, everything is omitted which can wound the sensitive modesty of the refined female. To the former it may be objected that it is unsuited for the character of the sex; that the delicacy and impressionable nature of cultivated woman, of which we are justly proud, *ipso facto* unfits them for the stern labour, the rugged and distasteful duties necessary to suffering humanity, and best performed by the stronger faculties of the male. Nor do we believe that the artificial cultivation of a breed of masculine women, unsexed, as it were, for the special functions of Medicine, would benefit the patients or society at large. Moreover, many secondary points of difficulty would arise as to the period of study at which the female was first to put on her male mental attire, how soon to leave off the pianoforte for chemistry, crochet work for dissection, in a word, general education and accomplishments for Professional and practical study.

Against the second object we raise a most decided and unqualified protest. Women half educated in sentimental fashion, with the omission of all sexual or other indelicate matters, would be sciolists of the most dangerous type, and perhaps also prudes of the demurest fashion. The harm done to sick and dying would immeasurably overbalance any slight saving of sensitive modesty which it might secure. In the service of illness, in the emergencies of accident, or the terrors of epidemics, these social virtues of lesser obligation should be boldly and purely set aside. It is a vulgarism of the narrowest kind to set up artificial restrictions to great works of charity and benevolence. To those who attempt their enforcement on mistaken religious grounds, we may oppose the authoritative statement that in their right use "my uncleanly parts have more abundant cleanliness." Indeed, it is only in the *roturier* and shopkeeping class of English society that such overstrained purism is rife; its fullest development is to be found in the congenial soil whence "Female Medicine" has been imported; if it be true, as is said, that in America it is correct to ask for the *limb* of a fowl, and the legs of tables are for decorum encased in drawers.

Let women learn their womanly duties as nurses to the highest degree of perfection. Let them also learn both as nurse and patient to bear with infractions of delicacy under the shield of charity or necessity. Let them, like Una in the witches' den, pass unharmed amid moral danger and impurity, followed and guarded by the strong lion of purity. Let them give their aid to their countrymen during the perils of war or the fears of epidemics unblushingly, and in the firm conviction of duty. But do not let them pander to squeamishness, or still less attempt to raise themselves into poor mimics of a profession from which their bodily strength, their mental organization, and the very qualities which form their highest charm and virtue should debar them.

THE SOCIAL SCIENCE CONGRESS AT EDINBURGH.

Numerous topics of direct or indirect interest to the Medical Profession have been discussed at the meeting which has taken place during the past week under the presidency of Lord Brougham. Had our space permitted, we should gladly have given our readers a fuller report, but we are compelled to content ourselves with briefly noticing the subjects and bearing of some of the more important papers and discussions. On Thursday, October 8, the subject of the "Admission of Women to Academical Degrees" occupied the Educational Section. The subject was introduced by Mr. W. A. Brown, who read a paper on the conservative side of the question. This was answered by Professor Lee on the part of Theology, and by Professor Struthers, of Aberdeen, on the part of Medicine. The latter gave an account of Miss Garrett's pursuit of Medical knowledge under difficulties, and of his own proposal to form a lady's class, and of the collapse of the project under the frowns of his colleagues. A Mr. Ernest Noel referred to the Government support given to the Female Medical College in the State of New York, and said that it was believed "that that College would meet a very much felt want in this and all other countries." He did not, however, say what the want was. It might be suggested that the chief "want" in the case was the want of something more suitable to do on the part of the fair collegians. A paper by Miss Nightingale on the "Death-rate of British Troops in India" was read on the same day in the Public Health Department. As this subject has been lately fully discussed in our columns, it is sufficient to say that the authoress traced the present death-rate of 69 per 1000 to three principal causes,—1. The spirit ration of six ounces a-day, or eighteen gallons and a-half of raw spirits a year to each man; 2. The total want of drainage and bad water supply; and 3. The overcrowding in barracks. India was not intended to be the grave of the English; the climate only required that social habits and customs should be adapted to it. Mr. Rawlinson, in commenting on Miss Nightingale's paper, mentioned an instance of a station where, by enforcing temperance amongst the troops, the death-rate had been reduced from 44 to 14.

In the Public Health Department, on Friday, a paper was read by Dr. Stevenson Macadam on the "Contamination of Water by Imperfect Drainage," which elicited from Professor Bennett an opinion that bad smells do no harm, and that there was not the shadow of proof that anyone was injured by them. This statement, as may be supposed, did not go unchallenged. Dr. Alexander Wood asserted that a bad smell was an indication given by the Almighty that something was wrong which required to be put right. He protested in the name of the Medical Profession against the doctrine that bad air was of less consequence than bad water. Dr. Ogle read a paper on "Medical Reform," in which he suggested that all persons should adopt the Chinese plan of paying an annual stipend to the Doctor, with the improvement that there should be an extra fee on extraordinary occasions. We are only afraid that such a "reform" would meet with strong opposition!

Miss Nightingale's papers on the "Sanitary Statistics of Native Colonial Schools," and on the "Statistics of Native Hospitals," and the "Disappearance of Native Races," were read by Dr. Scoresby-Jackson, on Saturday, and attracted great attention. Her researches were founded on the returns of the Colonial Office, and although the materials were imperfect, they appeared sufficient to support certain conclusions. From the statistics of 143 schools in Ceylon, Australia, Natal, the West Coast of Africa, and British North America, with an average of 9938 pupils, it appeared that the mortality was at least double as high as amongst European children of the same age. She did not, however, think this fact attributable to education *per se*, but rather to mitigable causes, such as crowded, ill-ventilated school-rooms, and the neglect of out-door physical training and systematic labour. The system pursued in colonial schools has been founded on the home system, whereas an entirely different one, which makes physical exercise in the open air a prominent part of training, is necessary for the children of wild, uncivilised tribes. With regard to the statistics of native Hospitals, the returns showed a high mortality from bad drainage, bad water, imperfect agriculture, want of cleanliness, and other bad habits. Much was owing to the fact that the pioneers of British civilisation are not the best of the British people. Vicious habits, prostitution, and the use of intoxicating drinks are the great influences under which the savage races disappeared. Prostitution is the main cause of the diminution of the births. The decaying races are chiefly in Australia, New Zealand, Canada, and perhaps certain parts of South Africa. After the reading of Miss Nightingale's paper, a resolution was carried that the importance of the results she had obtained be represented to the Colonial Office by the Council of the Association.

Dr. Christison's inaugural address as President of the Public Heath Department, which was read on Wednesday morning, touched on many of the most important problems in Medical science. The statistical mode of inquiry was his first topic. He showed the fallacies of statistics if the basis on which they are founded be loose—if they embrace only a portion of the facts which the questions deal with. He drew particular attention to many defects in the Scottish system of registration, and said that he should place a much higher value on results obtained by the general observation of an acute Physician. Professor Christison then referred to the class of zymotic diseases, and especially dwelt on the etiology of typhus and typhoid fevers.

"Why is it, he asked, that typhus, which had been almost a perpetual pestilence in Edinburgh for a third of a century, has been of late wearing itself out, and last year almost flattering us with its extinction? The cause has certainly not yet been found out. My own strong impression is that the secret will be found to be connected with the theory which has been much canvassed in the present day—the successive changes of type or constitution of epidemic diseases. But as this is a favourite theory of my own, I shall not here insist on it further than by warning all inquirers into the origin of zymotic diseases, in foul miasmata, that they run great risks of ascribing to these, and the removal of these, fluctuations in the prevalence of such diseases, which are often far more probably owing to a more recondite cause—a change in epidemic constitution. After stating that the experience of all great towns showed that typhus never could prevail in face of employment, Professor Christison noticed the introduction and rise of the various forms of enteric fever. He said in relation to it that of all forms of fever none had been more confidently ascribed than this by London writers, Medical and non-medical, to faulty drainage and faulty provision of water-closets. If they were to believe what some have advanced on the subject, there was no case which might not be traced to foul air derived mainly from one of these sources. Were this a well-established principle in social science, the extinction of so deadly a fever should be no very difficult matter. Through the publicity given to the discovery by this Association, and the influence of its members, they might hope to see protection established far and wide against the pestilence. But he was sorry he could not call on them to assent to this theory, and carry out its consequences, for there were insurmountable facts in its way. During the period that this scourge had been increasing in London, had London been less drained, or the habits of its working classes less cleanly? Did the disease generally appear where drainage was bad or water-closets wanting or faultily constructed? Did it attack workmen who lived in London drains as well as those over them, near them, or far from them? He believed all these queries must be answered in the negative. So far as Edinburgh was concerned, the fever did not by any means generally break out where the streets were ill-drained, water-closets wanting, and habits filthy. In countless places of that sort in Edinburgh it was unknown, and it was unknown near the foul meadows of Craigentinny. He then made a brief allusion to diphtheria, a disease far from common in Edinburgh. It had, however, a strong local interest, having shown an attachment to those irrigated meadows. He wished to add, in regard to those meadows, that he had, after careful inquiry, been compelled to surrender his prejudices against them, being satisfied that neither typhus, nor enteric fever, nor dysentery, nor cholera, is to be encountered in or around them—whether in epidemic or non-epidemic seasons—more than in any other agricultural district of the neighbourhood. He thought it right, in reference to the late introduction of the Craigentinny system of irrigation into the vicinity of other large towns, that these precise facts should be known."

Dr. Christison then referred to diseases having their origin in a *prava corporis constitutio*, and especially to tubercular disease and its prevalence in towns. He thought that all special inquiries hitherto made pointed to the want of outdoor exercise as its main cause. For its remedy he recommended the laying-out of parts of cities in parks and gardens, and the surrender by employers of a certain portion of their time to the working-classes. In concluding, he alluded to the almost entire exemption of the populations of the isles of Scotland from tubercular disease.

THE OPENING OF THE SESSION AT NETLEY.

Upon the 1st inst. the Medical session at the Army Medical School was opened by an Introductory Lecture from Professor McLean at the Royal Victoria Hospital, Netley. The number of Medical candidates is 33, and, besides the numerous Medical officers, there was a good sprinkling of the civil element present. With the professors and officials were many visitors, and among them Sir James Clark, Sir Ranald Martin, Dr. Deas, C.B. We published last week an abstract of Professor McLean's admirable lecture; we shall not therefore here advert to it. But we wish to say a few words respecting the Royal Victoria Hospital and the address of Colonel Wilbraham which followed the Introductory Lecture. The handsome building at Netley has cost, we believe, upwards of a million. The general impression seems to be that the Hospital is scarcely what might have been expected for this large outlay. However, it is now an accomplished fact, and it is useless to descant upon things which cannot be altered. The accessories and offices to the Hospital are excellent. The washing establishment, cook-house, bakery, ablution and bath-rooms are extremely good, and the appliances for the sick equally so. Those portions of the building set apart for "school" purposes require some notice. The microscope-room is perhaps the finest in the world, and the appliances and arrangements in the rooms devoted to the study of practical hygiene are very interesting as well as excellent.

As we have before said, the course of instruction at this school is unique and admirable. In no other country, at no other place, can Medical students obtain such an amount of thoroughly practical information as at Netley. In our Medical schools and Universities a man too often attains a theoretical knowledge of scientific subjects; here he is made to acquire knowledge by and through the exercise of his own senses and observation. In pathology, hygiene, chemistry, and the use of the microscope the student is taught in a manner that must ensure a large amount of personal skill and well digested information. He is made to recognise and rightly appreciate the markings of disease in the tissues; he is taught to understand thoroughly the application of the microscope to the study and investigation of physiology and pathology; he acquires the means by which, as well as the mode of detecting adulterations in food and the impurities in air and water, etc. All these subjects are really taught, and not merely lectured upon. But all these good things are at present going a-begging! Advantages which ought to attract a goodly array of the most enthusiastic of our youthful workers in Medical science are narrowed in the limits of their application by the present dearth of candidates for the Army Medical Department.

At the close of Professor McLean's lecture Colonel Wilbraham, the Military Governor of the Hospital, addressed the Medical candidates. He bore testimony to the very high tone and gentlemanly feeling which had characterised the members of the Medical mess, and he pointed out the benefits which would accrue from their residence at Netley. He lamented the present unpopularity of the Army as a Medical service, which he appeared to think had arisen from the public expression of discontent on the part of a very few dissatisfied and querulous spirits. He endeavoured to remove the misapprehension which had arisen from the confusion of military command with social status, which, he added, were two perfectly distinct and separate things. It is upon this subject we dissent from the gallant Colonel. The alleged confusion is not made on the part of the Medical officer, and this summary way of dismissing their grievances as a mere misconception is far too facile a process to embrace the points at issue. We may admit to the full the truth of the distinction urged by the gallant Colonel without any danger to the cause for which our pages have pleaded. That cause is not narrowed to a question of relative rank. The spirit of discontent, however, is not limited to a few individuals, but is very general in the department. False and imaginary it may be —that depends upon the point of view taken—but limited that discontent is not, and we suspect that herein lies the sting. The quantity and quality of the candidates exhibit a sad falling off. Let us take a case of military command forced upon Medical officers. When a soldier is branded with B.C. by the Hospital-Sergeant in the Regimental Hospital, the only commissioned officer present is the Medical one. Now, the authorities are here on the horns of a dilemma. It is a parade, and the Medical officer is either made to command it, or to be himself commanded by a non-commissioned officer—his own Hospital-Sergeant—who is the only person present having military authority, if the Surgeon has none.

We have ever maintained that the due efficiency of the Army Medical service requires that its officers should be recognised in a double capacity. Whilst they are attached to the Army as Surgeons, and are bound never for a moment to lose sight of their Professional character and duties, they are really as much soldiers, in a comprehensive sense of the word, as are any officers who are not habitually called on to fight with the rank and file. For instance, they are every whit as much soldiers as are officers of engineers. They are subject to military discipline and law; in action, they are constantly under fire, and are often called on to undertake the most difficult Professional duties in exposed situations, where the soldier's courage is as indispensable as the Surgeon's skill. It is simply absurd to compare their position in this respect with that of clergymen and commissariat officers. Military rank to them is not, therefore, an empty honour,—it is a simple recognition of their status and duties in the army, to which they are as justly entitled as any other regimental or staff-officer.

The fact is, this question of relative rank is as distasteful to Medical as ever it can be to combatant officers. The Medical officer would hail with delight the appearance of some fixed rules which should so exactly define his position, allowances, and emoluments, as would prevent any collisions between the military and Medical elements. At present everything a Medical man has to expect is fixed upon the principle of relative rank; but he finds that the meaning of this is restricted by the reservation that he shall exercise no military command whatever, and that every Commission or Board—whatever be its nature—nay, even the social gathering at a mess-table, is said to involve command as much as a parade in a barrack square. A warrant tells him that his allowances shall be governed by his relative rank, but by the regulations he discovers that these allowances have been fixed upon a lower scale. It is manifest that a Medical officer does not know how to direct his steps aright, nor is he certain what relative rank does or does not mean.

What Medical officers want—and the present state of things will not cease until something of the kind be done—is, that the rules affecting them shall be laid down in Her Majesty's regulations in so clear a way that every officer shall be able to understand them.

FROM ABROAD—THE DISCUSSION ON VIVISECTIONS—PROFESSOR LANGENBECK AND THE POLISH GOVERNMENT — ALLEGED INFLUENCE OF HOMŒOPATHY ON PRESCRIBING—SUSPENSION OF THE AMERICAN SURGEON-GENERAL — REGISTRATION OF AMERICAN M.D.'S IN ENGLAND—THE FRENCH "DICTIONNAIRES DE MÉDECINE."

CIRCUMSTANCES have hitherto prevented our noticing the continuation of the discussion on vivisections at the French Academy of Medicine; but as this came to rather an abrupt conclusion we shall be enabled to dispose of it in a few words. In answer to the question of the Minister, the Academy has replied that no abuses exist, and that no interference on the part of authority is called for; but it is impossible to have read the admissions made during the discussion without a conviction that the first portion of this conclusion is directly contrary to fact. Abuses, both with respect to the needless repetition of vivisections and the practising of operations on animals, do only too truly exist. But we are rather disposed to agree with the Academy in deprecating all authoritative interference, even in France, where matters great and small are habitually dealt with by edicts and harassing supervision. Such interference would be too indiscriminate and mischievous unless under the guidance of men of science themselves, whose co-operation in the cause of humanity should be sought for, not compelled. Much of the unsatisfactory character of the discussion and decision has doubtless arisen from the indiscriminate assertions and improper tone with which our somewhat fanatical Society called for the interposition of the French Government, for it has been said, with some truth, that a country which still gives so much encouragement to the brutal practice of prize-fighting, and is so passionately addicted to field-sports, is not exactly the one to which the mission of lecturing other countries on the duties of humanity should be confided. But the Academy should have risen above such considerations, put John Bull and his impertinence out of question, and investigated the matter brought before it upon its own merits. The most difficult portion of the present practice to defend is the practising veterinary operations upon living animals; but this also has been undertaken by the eminent veterinarians, members of the Academy. M. Bouley, while not denying the fact stated by M. Dubois, that sixty-four operations had been performed on the same horse, endeavoured to extenuate the horrible character of the statement by declaring that the bulk of these were mere punctures, small incisions, fractures, passage of setons, and the like, and therefore not very painful. Moreover, at the present time far fewer operations are performed upon the same animal than heretofore, and these will become fewer still if the supply of horses proves less parsimonious, until, at last, all that can be desired will be accomplished, viz., the provision of a horse for each operation! As to the desirableness of these operations, you have only, M. Bouley states, to observe the superior dexterity of French, compared with that of German and English veterinarians, to be convinced of it; and it is a remarkable fact that of all the foreign students who frequent Alfort, the English are those who practise these operations with greatest eagerness, so that, M. Bouley observes, one might think they had a revolted Sepoy under their scalpels! These operations are necessary in order to accustom the pupil to deal with the living horse, and their expensiveness renders the use of anæsthetics out of the question. M. Reynal, the Director of Alfort, disputes the accuracy of the parallel which has been drawn between human and veterinary medicine, in order to prove that the one as well as the other might acquire the necessary dexterity by practising on the dead body. In Veterinary Surgery there is a far larger proportion of operative procedures, so that while the time which the student has to devote to the acquisition of a knowledge of his Profession is considerably less, he no sooner enters practice than he is called on to undertake operations, upon the due execution of which his future reputation may depend. To supersede the present practices, either the parents of the pupils, who can ill afford it, must be put to much greater expense, or the budget of the school must be greatly increased. These operations are, in fact, far more justifiable than are many physiological experiments, especially in the restricted form in which they have of late years been resorted to. MM. Vernois and Gosselin strongly advocated the unrestricted practice of vivisections, leaving their regulation and repetition to the conscience of the operator. The debate terminated in an unprecedented manner, for the reply to the Minister's question proposed by the Committee was unanimously rejected, and an amendment proposed by M. Gosselin was as unanimously voted. The resolutions of the Committee seemed conciliatory enough, merely hinting that any appearance of cruelty should be avoided, and the proceedings of veterinary students placed under some control. Indeed, M. Dubois, the Secretary of the Academy, considering that they did not go far enough, proposed an amendment which called for some restriction on the practice of vivisection, and a prohibition of the practising of operations by students on living animals. This amendment M. Dubois defended by an eloquent speech, which we have already noticed, but, as he was accidentally absent when the debate terminated, it was never put to the vote. If it had been, it would have been certainly rejected. M. Gosselin's successful amendment, maintaining that everything that is is best, was thus worded:—"The Academy declares that the complaints of the London Society are unfounded, and require no notice. As heretofore, vivisections and operations practised in the Veterinary Schools should be left to the discretion of the professors."

An interesting anecdote of the present Polish war is thus related:—A French officer having become seriously wounded, his Polish friends sent for Professor Langenbeck from Berlin to Posen. By a dexterous operation, he removed a ball, and put his patient on the way for recovery, but refused all remuneration for his valuable services. The Polish Secret Government has, in consequence, addressed the following letter to him:—

"Sir,—The National Government is happy in having to express its thanks to you for the noble and disinterested zeal with which you devoted your eminent talents to the relief of M. Faucheux, whose wounds constitute a national debt for the Poles. The National Government, besides its obligation of watching over the defence of the country, assumes the duty of honouring the friends of the Poles. It has no orders at its disposal, and must content itself with transmitting these few lines, in order to express its thanks in the name of the Polish nation."

In a recent number of the *American Medical Times* occurs an observation deserving of more notice than it has met with. It has often been stated with confidence by the homœopathists that one marked result of their practice has been to force upon regular Practitioners a simple mode of prescribing, medicines being employed in less bulk and less nauseous forms. In truth, however, they are claiming for themselves what has been only the consequence of improved chemical and physiological knowledge. The alkaloids and other active principles of medicinal substances began to come into use about the period when the homœopathic delusion came into vogue, and from that time medicines have been administered in much less bulk and with more attention to their agreeable combination and the adjuvatory powers of other appliances. But the very fact of these chemical improvements, by which powerful agents could be administered in very small bulk, has become in the hands of the homœopaths an instrument of the grossest deception and for their patients a source of the highest danger, for there can be no doubt by their aid agents of powerful operation have been substituted for inert globules, and have been taken with a recklessness and frequency which has been attended with the worst possible results.

Verily our American cousins seem a strange race. For a long time we have been reading that Surgeon-General Hammond has been working wonders in the Army Medical Department, having restored it from the chaotic and disgraceful state in which he found it to one of admirable order—an example for that of all other countries. And making allowance for the usual transatlantic exaggerations, he really seems to have performed his work well. Appointed by the President, in spite of the old routine custom, over the heads of many seniors, he came to his task full of vigour, in the prime of life, and capable of great physical endurance. With a bold hand he surrounded himself with trustworthy subordinates, displacing many who he did not think equal to the crisis, and proceeded energetically with his work. Large armies had to be provided for, a system of military Hospitals to be organised, the examining boards to be reconstructed, and an army Medical school and museum to be founded. Well, in these vast and useful works he seems to have succeeded beyond all expectation, and the confidence of the public in the new system of Medical organisation has been warmly expressed, and yet, by the last accounts we learn that he has been suspended from his office, and ordered to a distant service, a commission having been appointed to inquire into the condition and management of his office. No charge against him or reason for the investigation has transpired.

To finish with our American news, we may quote a scrap of caution for our Medical Council of Registration:—

"The English Medical Act (says the editor of the *American Medical Times*) which compels every person practising Medicine and Surgery to be qualified and registered (unfortunately it *compels* no such thing), does not, it seems, prevent quacks from this country obtaining a foothold in the Profession. Many of these graduates from chartered Medical colleges exhibit their diplomas, are registered, and commence practice. The Profession of England should understand that our State Legislatures charter colleges of every complexion, and the graduates of these institutions are therefore legally qualified. The title of M.D. in this country has no significance whatever."

Every one at all acquainted with Medical bibliography must be aware of the great value which attaches to the French *Dictionnaires de Médecine*. At the time of their publication, contributed to as they had been by so many men of the highest talent, they were, and, indeed, still are, unrivalled. Of course, having been published many years ago, much of the information they now contain is only of historical interest, and we are glad to find that two out of the three of these dictionaries are about to be re-edited, or almost re-written. The house of Baillière and Son has undertaken to bring out a new edition of the *Dictionnaire* in 15 volumes, under the editorship of M. Jaccoud, while the house of Asselin has united with that of Victor Masson and Son in reproducing the *Dictionnaire* in 30 volumes, under the auspices of MM. Raige-Delorme and Dechambre. Surely a contemporary translation of this new edition of one of these famous works, especially the latter, published at a moderate price, would be an acceptable boon for the English reader.

MR. MACKENZIE, of Fawley Court, has presented £14,000 to the British Orphan Asylum, to pay for the new buildings and grounds at Slough.

SPECIAL REPORT ON THE LATE EPIDEMIC OF SCARLET FEVER, AND ON THE GENERAL SANITARY STATE OF EASTBOURNE.

(From our Special Commissioner.)

AMONG the health-resorts of the southern district of England, Eastbourne has for a long time held a conspicuous position, more especially since the Registrar-General's Report has shown that the rate of mortality for each thousand of the population is 15, or 10 less than the general average of London (25), and 1 lower than the lowest of our other watering-places. With such a reputation as this, and from such an authority, we are not surprised that so many fashionable persons and health-seekers have run down to enjoy the good bathing and smooth sands of this quiet spot. Of course, we now refer to the modern Eastbourne by the sea, where visitors flock to avoid the cachexia of large towns, as distinguished from that Eastbourne of the olden time, which lies about a mile and a half more inland, and quite separate. The quietude of that watering-place having recently been much disturbed, and the public mind dismayed by an outbreak of scarlet fever, we have taken considerable pains to sift the facts connected with this unfortunate event in justice to the public and to our Profession.

The new town is situate close to the sea, having an extensive range along the coast. The old town lies in a valley a mile behind, picturesquely situated, and nearly surrounded by hills. There is also a marshy district. Along the sea runs the Marine Parade, against which the tide beats at high water, covering the sands and beach.

The soil belongs to the cretaceous formation. We saw a well in course of sinking, the upper surface being chalk, under which lies the chalk marl; then we observed the upper green sand-rock, from which a portion of the water that supplies the town was bursting in myriads of crystal streams. These strata are followed by gault clay and the lower green sand-rock, which feeds the artesian well. The reservoir is situate on Mill-hill, near the railway-station, commanding a very fine and extensive view of the new and old towns of Eastbourne, and of the English Channel. The water is supplied from a natural spring in the sandstone; it is then pumped up into the reservoir, about 150 feet above the level of the town, whence it gravitates to the different houses, and, being under constant pressure, affords an average of twenty gallons of water to each inhabitant. This continuous supply of water is a most important sanitary arrangement, and, in order to ensure its continuance, another well is now constructing. But to understand the water supply properly, we may add that a well has been sunk seventy feet deep into the upper green sand, care being taken to exclude surface water as much as possible. From the level of this well an artesian boring is extended through the gault clay into the lower green sand, from which water also flows into the well. In 1859, an analysis was made of the water by an eminent chemist, when it was found to be perfectly free from colouring matter. It contained a very small proportion of organic impurity, and was esteemed to be in every respect a pure and wholesome water. But we possess samples for future analysis.

In referring now to the drainage, we may state that a "local authority" has existed about three or four years to carry out sanitary improvements—a Medical man, Mr. Jeffery, being a member of the committee, and that, as a rule, they meet on the first Monday of every month. Mr. Wallis, the Town Surveyor, is one of the officers, and acts also as Inspector of Nuisances, besides holding the appointment of surveyor to the Duke of Devonshire. Under his skilful supervision all sanitary operations with respect to the water supply and drainage are effected.

Any person who has not visited Eastbourne for the last four or five years must be struck with the great increase of new buildings. It, in appearance, is surprisingly clean, and we in vain look for any open gutters or drains allowing foul accumulations to ferment on the surface. In addition to this, the Sanitary Board have ordered the gullies to be trapped; have forbidden pigs to be kept; and have issued notices for the erection of waterclosets, and cesspools to be abolished wherever possible.

But still, it is admitted by all that the drainage requires immediate improvement, and although it may be allowed that the scarlet fever was imported into the town, yet how far "latet anguis in herbâ," and by what means the reptile may be not merely scotched, but killed, we can probably gather from the following observations:—

The population of Eastbourne was 5795 at the census of 1861, and was thus subdivided:—

Ecclesiastical district of Holy Trinity .	3796
Remainder of the parish	1999
Total	5795

The ecclesiastical district of Holy Trinity includes Southbourne (or South-street) and Sea Side; in fact, the whole of the new town.

The remainder of the parish includes Meads and the old town. The population of these parts was fixed at—

Meads	649
Old town	1350
Total	1999

The increase of the resident population since 1861 may be estimated at from 1000 to 2000, while the number of visitors may be reckoned from 2000 to 3000, making the total estimated population 10,000. It has been calculated to be as high as 12,000 (including visitors), and this may be more correct, but the medium probably will be the safer number to take.

Overcrowding must happen in some parts of the town during the season. At such a period scarlet fever comes like a thunderbolt, and Eastbourne at once is deserted, as far as strangers are concerned.

The drainage of the new town is effected by a brick main, about two feet in diameter, passing through it, and having a wooden outlet or culvert near the end of the Marine Parade, on the town side of the Redoubt. This is not covered by the sea at low tide, but it is closed at that time by a trap, so that no sewage can pass out of it. A district, called "The Marshes," is drained separately into the sea through an iron culvert supported on piles, and extending about the same distance as the other. It is situate about 700 yards east of the Redoubt Tower.

The old town has no drainage whatever, but one is contemplated.

There can be no doubt that the present outfall of drainage is too near the new town, and it is questionable how far the capacity of the main drain may be sufficient to meet the future requirements of this rapidly-extending watering-place. We are glad, however, to state that active means are now under consideration to keep pace with the increased building operations. An estimated cost of £6000 has been made, to which the Duke of Devonshire has contributed £1000, for improved drainage, and when the Surveyor has completed his plans, which include the requisite alterations in the old town, the work will be commenced.

We now pass on to the outbreak of scarlet fever. Mr. Jeffery saw the first case of the disease on September 4, a patient of Mr. Colgate's, who died three hours afterwards. He has resided at Eastbourne sixteen years, and does not remember to have seen a case of scarlet fever since 1854, when, he believes, the complaint was imported. He had then 104 cases. He has attended now 36 cases, with Mr. Whitefield, his partner, between September 6 and October 13, with only one death, that of a lady, aged 56. The outbreak in 1854 was no doubt very severe, but our observations will be strictly confined to the recent epidemic. Out of the preceding patients (36) attacked, 7 only were residents, 29 visitors, and out of the whole number of patients only 8 remain in Eastbourne, the other 28 having actually acquired scarlet fever, and gone to their homes in various parts of the country. Respecting the locality of the fever—6 patients, one being Mr. Colgate's, lived in the Marine Parade, 2 in Victoria-place, 4 in the Grand Parade, 6 in Cavendish-place, 4 in Sea-side-road, 2 in Trinity-place, 1 in Terminus-road, and the remainder at Sea Side.

Now, with regard to the evidence of the disease having been imported, it is necessary to examine the cases of sick paupers, of which Mr. Colgate and his partner, Mr. Kent, have the care. It appears that they attended the two first patients, aged 4 and 7 respectively, on September 20, at the bottom of Sea Side, in a place called Mann's-row; there was no complaint of the drainage, but the houses were old, overcrowded, and dirty. Then two children, named Vines, aged 4 and 8, suffered from the complaint, and were seen on September 28. They lived in the old town, where there is no proper drainage, but only cesspools, and eleven persons slept in two small bedrooms. The mother and daughters washed for a family living in the new town, two of whom died of scarlet fever, and it is thought that the infection was conveyed to the Vines in this manner. No other case occurred in the old town, and only one more pauper patient was visited afterwards, namely, a child, aged 3, on September 30, living in Tower-street, Sea Side, in the new town, so that these Medical gentlemen will have to return only five cases to the Poor-law Board. Messrs. Colgate and Kent attended forty patients altogether, and the first case was seen on September 2, Mr. Jeffery having seen it on September 4 with Mr. Colgate, as previously stated.

Hence we see that out of
Mr. Jeffery's cases there were Residents 7 Visitors 29
Messrs. Colgate and Kent's ,, 5 ,, 35

Dr. Andrew has attended about twenty-five cases, some of which were patients of Mr. Roberts, and firmly believes that the disease was introduced from elsewhere.

Dr. Hayman attended Mr. Hanbury's family, in which two deaths occurred from scarlet fever.

So far, then, it is clear that scarlet fever was introduced into Eastbourne through the visitors.

Touching the mortality, we find that thirteen deaths were registered up to October 8, and that three only were those of the children of residents.

Painful must be the reflections of many in consequence of this epidemic, but the outlay of a few thousand pounds in sanitary works may prevent future losses. The present attack was imported; nevertheless, the bad state of the old town, and the present outfall of sewage so near to the new, may form suitable foci for engendering zymotic disease, or may favour its spread when introduced. Our urgent advice, therefore, to the local authority is to be up and doing, and to commence thorough drainage works at once, in order that the numerous health-seekers may enjoy without fear the refreshing sea-breezes, the invigorating "constitutional" to Beachy Head, in whose clefts samphire and sea-kale grow naturally, and the beautiful scenery of this highly favoured locality.

NOTES ON SOME OF THE PARIS HOSPITALS.

(*From an Occasional Correspondent.*)

THE LARIBOISIERE.

The Lariboisière is, perhaps, the finest Hospital in Europe; it is quite a recent structure, and is built on the pavilion system. In the middle is a square garden, at the south side of which is the entrance, and at the north the chapel, which of itself is well worth a visit; immediately surrounding the garden is a handsome corridor, and, jutting east and west, are ten pavilions, five on each side, but only six of these ten are wards, each pavilion consisting of three wards, containing about thirty beds each, making altogether 806 beds; the garden also separates the men and women. Between the pavilions are gardens, and each pavilion is much the same as a small Hospital; the wards are prettily painted, both walls, and ceiling, and the floor varnished, but here, as in most of the Parisian Hospitals, there exists a great objection to having the windows open, and these wards, which from their situation and construction ought to be as pure as a dwelling-house, are hot, close, and with an unpleasant odour; I am speaking of the summer time.

I purpose going round with M. Chassaignac, who operates every Monday morning, and who here practises his écraseur and his equally-celebrated drainage tubes. The tubes consist of a piece of india-rubber about the thickness of a crow's quill, and having holes cut into them for the purpose of carrying off the *effete* material.

In the first ward we go into there are thirty-four beds, and, excepting thirteen, all the patients have tubes in some part or other, and of the thirteen exceptions nine are fractures and amputations, and the others are cases where there cannot possibly be anything to drain off. The first case is one of scrofulous enlargement of the glands of the neck, with two tubes passed through them; the next is a case of diseased tarsal bones, and there are not less than four tubes passed through different parts of the foot; here is a thickened femur, there a swelled testicle, followed by cases of disease of the knee and hip-joints, and one of effusion into the fore-arm following erysipelas, all treated on the drainage system. In diseases of joints, which all appear to come under the general term of "tumeurs blanches," the drainage treatment is sometimes varied with scarifications, and as the Surgeons keep their patients in for months together, I have no doubt but this treatment, assisted by perfect rest, is frequently efficacious. The other male ward is a repetition, and we now pass over to the female ward, which contains at least one case where the tubes seem to have been of service, one of psoas abscess connected with disease of the vertebra, and which is drained away just above Poupart's ligament; near it is one of iliac abscess with the same treatment, but in this instance one of the tubes is made to come out into the vagina at one end, and at the other just above Poupart's ligament. In the next bed is a case of acute abscess of the breast following confinement; two long trocars with canulas are passed through crossways, the trocars withdrawn, and the tubes passed through the canulas and left in to drain off the matter; the same treatment is pursued for a small abscess following a blow over the tibia. In all French Hospitals there is a great want of delicacy in the treatment of the female patients, but here it is especially evident, and it becomes difficult to understand how any female patient can long retain her self-respect. I must not omit mentioning M. Chassaignac's application to all sores, cuts, bruises, ulcers, sore throats, and drainage holes, all are treated with a solution of nitrate of silver.

We now pass on to the operating theatre, and here the écraseur seems to have quite dethroned the knife. The first case is one of epithelioma of the posterior part of the anus; having been isolated by passing two trocars crossways under it, it is slowly amputated with the écraseur; a sinus caused by a drainage tube is laid open with the same instrument, and it also removes a small epithelial tumour under the eye, isolating it with curved suture needles. Another case is one of a small subcutaneous tumour in the neck near the jaw, and here the chain is passed underneath by means of trocar and canula, and made to cut straight out through the tumour and integuments; it is now pressed out, and taken off by another application of the instrument. The girl had not chloroform, and it evidently gave her considerable pain; a week after it was a large granulating ulcer, and gave promise of leaving an ugly scar. The next patient is a poor girl with a doubtful tumour in the left side of the abdomen, and, in order to assist the diagnosis, a trocar is passed in, the first time without result, but the second puncture gave exit to pus; a large trocar and canula is now passed through, and a drainage tube left in; next day the girl died, and the post-mortem showed extensive suppuration of the kidney. Two cases of circumcision followed; the prepuce is drawn forward, a pin passed through, and the piece cut off with the écraseur. There are now two cases of removal of enlarged tonsils, and they are quickly and neatly taken off with the guillotine, and by fixing an instrument on each tonsil, M. Chassaignac removes them both nearly at the same time. Then follows a case of excision of a varicose vein to the extent of about an inch; two needles are passed under the vein, the écraseur passed under the needles, and an attempt is made to cut off the piece thus raised, but it is in vain M. Chassaignac employs his strength to make the chains cut through the skin; it breaks, and another is tried, but in the end it has to be cut off with a bistoury, after causing the patient, who is in the usual state of half insensibility, a great deal of suffering. I have also seen removed with the same instrument a tumour of the neck of the uterus, and twice the neck itself, once for cancer and once for hypertrophy of the supervaginal portion of the neck, causing prolapse. Another day M. Chassaignac removed two nails by means of a new instrument, consisting of a handle and a small piece of thin steel the shape of a nail; it is forcibly thrust under the nail, and the latter torn off between it and the thumb. It is quickly done, but must cause excruciating pain.

The chief advantage claimed for the écraseur is the prevention of hæmorrhage, but in this it not unfrequently fails, and it has its disadvantages, the chief of which are the pain it causes, even in slight operations, and the jagged wound it makes where a simple incision only would be left by the scalpel; it also requires much longer time, and frequently requires the use of the scissors to polish off a little. No doubt M. Chassaignac uses it in many cases where there is no fear of hæmorrhage, but specialty always leads to the abuse rather than to the use of any instrument, and I have seen the removal of malignant disease of the breast by not less than twenty-four applications of the écraseur, taking a small piece each time, and leaving a jagged surface of about four square inches to granulate. The drainage tubes appear to be useful in chronic abscesses where there is danger in opening them with the lancet, and as counter-irritants in disease of bone or joints.

(To be continued.)

REVIEWS.

The Discovery of the Physiological Method of Inducing Respiration in Cases of Apparent Death from Drowning, Chloroform Still-Birth, Noxious Gases, etc., etc. By Henry R. Silvester, B.A., M.D. Lond., Clapham Common, S., Associate of King's College, London, and formerly Scholar in Human and Comparative Anatomy in the Royal College of Surgeons in England. Third Edition. London: Churchill and Sons. Pp. 46. 1863.

The circular of the National Life-Boat Institution which we recently published constitutes a fitting introduction to the review of Dr. Silvester's book, which we now enter upon. In doing this we propose to compare—taking Dr. Silvester, the report of Committee of the Royal Medical and Chirurgical Society, and other documents reprinted by Dr. Silvester as our guide—the two methods chiefly in use for restoring suspended animation without the aid of mechanical appliances, namely, that of Dr. Marshall Hall, "the Ready Method," and the new method some little time ago first propounded by the author of the book before us. We shall not enter again into the mode of carrying out these two methods of restoration, because our readers can turn back to the description, where they are embodied in the two sets of instructions at the present time in force among the officers of the Life-Boat Institution and of the Royal Humane Society respectively. We shall content ourselves with pointing out the following differences between the two sets of instructions. 1. In applying the "Ready Method" the tendency of the tongue to fall back into the throat, and thus to close the orifice of the larynx, is left to be counteracted by the posture upon the face. In the "New Method" of Dr. Silvester, the tongue is directed to be drawn forward and maintained with the tip in advance of the teeth by mechanical means. 2. In the Ready Method the attempt to imitate respiration is made by compression of the parietes of the chest, by the weight of the body of the patient when turned on the chest, and by the return to their former condition by the elasticity of the ribs when the weight is removed, the body being turned upon the side; the first thing here is the compression and driving out of residual air, the second the introduction of fresh air to supply its place. In the new method, advantage is taken of the attachments of the muscles engaged in the act of deep inspiration, and the expansion of the walls of the thorax is effected in the same way as if the patient himself were to make the inspiratory effort. The discharge of the air results from the resiliency of the parietes on depressing the arms, and by the mechanical compression of the sides of the chest and lower part of the sternum. 3. The "Ready Method" is incompatible with the simultaneous use of some other methods of restoring animation, and especially with the use of the warm bath, which is besides specially prohibited by its author. On the other hand, the use of the warm bath is advocated by Dr. Silvester during the period that attempts are being made to imitate the act of breathing.

And now for our comparison of the advantages and disadvantages of the two processes.

1. The condition of the chest in the cases in which either of these processes has to be applied is one of ordinary expiration. For the most part it is desirable not to increase this condition, but at once to promote the reverse. In the "Ready Method," the first thing done, however, is to drive out a portion of the residual air, and the next to replace it by fresh. There is no attempt made to imitate the natural act of inspiration. In still-born children there is no residual air to force out, and hence by this method no air can be introduced. On the other hand, by the new method inspiration, as is natural, precedes expiration. The method then is also applicable to new-born children, where the application of reflex stimuli have failed to establish the respiratory act.

2. In the "Ready Method," the expansion of the thorax depending on little more than the elasticity of the tissues, takes place feebly, inefficiently, and slowly. In the new method the amount of air introduced in elevation of the arms is very much larger, and is wholly under the control of the operator. In the experiments of the committee of the Royal Medical and Chirurgical Society it was found that the volume of air exchanged in the former process was very variable in the same subject, but always inconsiderable, varying, indeed, from one to eight cubic inches—never more, generally much less, than eight; and besides that, the quantity introduced on restoring the patient to the lateral posture was usually less than that expelled by pronation. In Dr. Silvester's method it was found that for the same subject the results were very uniform, the quantity of air introduced varying in different subjects from nine to forty-four cubic inches, and that expelled being pretty nearly equal, occasionally less.

3. In the "Ready Method" both sides of the chest are not equally inflated, they necessarily are so in the new method.

4. The application of the "Ready Method" is scarcely possible without some degree of rough usage—"the rolling and tumbling about of the body," Sir B. Brodie writes, "cannot, I apprehend, be otherwise than mischievous where the chances of life and death are equally balanced, and must, in all cases, interfere with the natural process of recovery." He also says: "It seems more than probable that the repeated compression of the chest for the purpose of expelling all the air from the lungs would have an injurious effect on the action of the heart." Other injuries to the face and neck are also liable to occur; moreover, to the operator the process is very arduous. In Dr. Silvester's process no injury is likely to be done by the manipulation, and the fatigue to the operator is comparatively trifling.

5. In the "Ready Method" there is danger of the contents of the stomach passing into the œsophagus and windpipe, when the patient is turned upon the face and pressure made on the back. No such danger exists in the new method.

6. The tongue is an obstruction to the introduction of air into the chest in the "Ready Method." Dr. Silvester thus explains the difficulty:—"In cases of asphyxia the tongue is usually swollen, and falls back into the throat, acting as a plug to the pharynx, and a sort of valvular covering to the otherwise patulous orifice of the larynx. In the postural method, when the body is turned on the face, no doubt the tongue falls forwards, and draws with it the epiglottis, and leaves the glottis open. This, however, is of little consequence so far as respiration is concerned, for the very compression of the chest by the weight of the body itself forces out the air from the lungs, and so lifts up the valvular covering of the larynx, so that, in fact, the tongue does not offer any serious obstacle to expiration when it is induced by compression of the thorax. Moreover, in the postural method, the moment the patient is rolled "on the side and a little beyond" in order that inspiration may take place, the tongue is liable to fall back into the throat, and its semi-lifeless relaxed tissue to cover securely the orifice of the glottis, and its accurate closure is probably further insured by the suction generated by the return of the thoracic parietes to their natural level, so that the greater the previous compression of the chest, the more firmly is the tongue drawn down as a plug into the throat when the pressure is relaxed, and the more effectually does it prevent the entrance of air into the lungs."—P. 12. In Dr. Silvester's method the tongue is fixed forward, and the opening of the larynx kept free.

7. The "Ready Method" is plainly incompatible with the simultaneous use of the warm bath. This is self-evident. It also interferes with the preservation of animal heat by disturbing the articles of clothing placed as covering to the body. The new method has no such disadvantages. But Dr. Marshall Hall did not consider this a disadvantage, inasmuch as, upon theoretical grounds, he held that the warm bath was not applicable to such cases. Dr. Silvester relying, and we think justly, upon the experience of the Royal Humane Society, is indisposed to take this view, and concludes that while the warm bath may be considered an auxiliary means, and while much dependence is to be placed on both friction and warmth, nevertheless, nothing should be allowed to interfere with the application of those means by which warth is restored to the skin. In a paper by Dr. Christian, "On the Restoration of Suspended Animation in

Persons apparently Drowned," he remarked that it must be understood that it is used as an immediate and powerful excitant; and it had so frequently happened that a person brought into the Humane Society's Receiving-house as asphyxiated and apparently dead, gave, on being placed in the bath, a sob or gasp, which is the precursor of respiration. Dr. Taylor observes, too, in respect to this subject, that "in one of the most remarkable cases of resuscitation on record, the individual had been fourteen minutes under water, and no signs of returning animation were evinced until the treatment, which consisted simply in the application of warmth and constant friction, had been persisted in for eight hours and a-half from the time of the accident." Dr. Silvester has another suggestion. "It is well known," he says, "that hot air increases respiration; a person respires more frequently in hot air than in cold. It also increases pulsation. Cold also increases respiration, but acting only as a shock it does not increase pulsation. Accordingly, I would suggest the employment of a hot air bath when practicable in cases of suspended animation as a general stimulant to both the respiration and circulation with the occasional application of cold, to act on the principle of shock, and so accelerate any respiratory efforts."

We think that this *resumé* embraces the principal points at issue between the two processes. Dr. Silvester's little book, published as it is at a low price, and embracing the evidence in favour of his method and a detail of the experiments performed by the Committee of the Royal Medical and Chirurgical Society, ought to find its way into the hands of every Medical Practitioner, any one of whom may, without a moment's warning, be called upon to decide as to the plan he will adopt for the restoration of a person apparently dead from apnœa.

Health and Meteorology of Manchester, communicated to the Manchester and Salford Sanitary Association. Weekly Return. Vol. III. No. 165.

This is a publication which deserves our warmest praises. It shows that public spirit and unpaid energy can produce results which are not to be had elsewhere for money. It gives weekly returns of the meteorology, then of the number of cases of sickness from pauper, charitable, and public institutions, and deaths from zymotic and preventable diseases. If such an honest matter-of-fact return were published at all health resorts—say Eastbourne, Brighton, Hastings, Margate—it would redound to the credit, and ultimately to the benefit of the inhabitants.

GENERAL CORRESPONDENCE.

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THE ASPHYXIA, OR APNŒA OF THE DROWNED.

LETTER FROM MR. CHARLES HUNTER.

[To the Editor of the Medical Times and Gazette.]

SIR,—Once more, and after the lapse of six years, the National Life-Boat Institution appeal to you for aid in eliciting from the Profession advice on the treatment of drowning.

Until six years ago their rules had been the same as those of the Royal Humane Society—rules which then inculcated heat in every form, from the "warm-bath," "bed," and "chamber," to the "heated bricks" for the feet. But in 1856, Dr. Marshall Hall pointed out, to the Society in particular, and to the world, that to restore a patient dying from obstructed respiration, the re-establishment of respiration was indicated, and not the profuse administration of warmth. The Professional world saw the value of the plan, and adopted it. The Royal Humane Society refused to see it, but adopted, without acknowledgment, one or two important suggestions of Marshall Hall. The National Life-Boat Institution saw the rapid spread of the new treatment, and before discarding the "hot-bath plan" they publicly appealed to the Profession for advice. From the various societies and Medical men appealed to, at home and abroad, they received 300 answers. They were to this effect:—

In favour of Dr. Marshall Hall's plan .	. 254
In favour of the Royal Humane Society's .	. 10
Those who would combine the rules . .	. 20
Those undecided, or who gave no opinion .	. 16
	300

With such an overwhelming majority in favour of the Marshall Hall method, the committee felt that they "had no option but to modify the rules in accordance with it." But the Life-Boat Institution again appeals to the Profession.

A method has been proposed by Dr. Silvester for performing artificial respiration, and the Humane Society have, in principle, adopted it; but they have adopted something still more valuable. They have at last recognised the importance of attending to the respiration, so strongly, and without effect, urged upon them years ago. They now tell us—"The points to be aimed at are, first and immediately, the restoration of respiration; and, secondly, after breathing is restored, the promotion of warmth and circulation."

Thus far, be it therefore noted, both societies now profess a treatment based upon the same physiological principle or law.

It is as to the best method of acting up to this law that the appeal is now made to us by the Lifeboat Institution, which is not a Medical body. Let us therefore freely reply to questions so honestly asked, and give them our opinion, or experience, or the result of our experiments on this important subject, recollecting the many thousand lives annually imperilled on our coasts, and to whom we may thus give a helping hand. On the other hand, let the Institution not too hastily resign the rules they now advise—rules recommended to them as the result of many careful experiments, the sound physiology of which has been testified to by Snow, Paget, and other authorities; and their practical value almost unanimously proclaimed to them by the replies they received to their former appeal.

Still, let them at once resign the Marshall Hall method if a better plan be discovered. But let the evidence for that better be as overwhelming in its favour as was the Marshall Hall method six years ago over that of the Humane Society.

The principal object of treatment being, as I have above said, the same with both Societies, let us briefly look at the main points of difference in action.

In some points the rules of the Society are directly copied from those of Marshall Hall, but in three points they materially differ:—

1. As to clearing the throat.
2. The position of the patient; and
3. The mode of producing artificial respiration.

These are the main points meriting our attention, and on which to reply to the Lifeboat Institution:—Whether we think the drowned man's throat can best be cleared in the supine position or the prone; and whether the fluid that has entered the trachea and lungs during drowning can be as easily removed during artificial respiration "on the back," as by "the prone and postural method." Not now to trespass further on your space. I am, &c.

30, Wilton-place, S.W., Oct. 10. CHARLES HUNTER.

THE ADMIRALTY TREATMENT OF NAVAL MEDICAL OFFICERS.

[To the Editor of the Medical Times and Gazette.]

SIR,—I beg to submit, for the information of your readers, a simple statement of the grievances endured by Naval Medical Officers, which have been recently brought before the Duke of Somerset by the British Medical Association.

1. In no case can an Assistant-Surgeon *claim* a cabin in any ship at the same time that his junior in rank and age, the young marine officer, a boy of 16, can do so. In the line-of-battle ships and frigates, the junior assistant has no cabin which he can call his own. In some cases he is allowed to occupy one in the absence of the "naval instructor;" or, as I have known very recently, when the captain has not met with an eligible steward, in such cases an educated young man may, until the arrival of this latter personage, enjoy the comforts of one of the largest cabins in the ship, otherwise he is obliged to sleep in a hammock in the cock-pit with the middies.

2. The Surgeon gains no advantage whatever by increased relative rank, although he is, as a rule, the senior next to the commander in the ward room. He has a choice of cabin accommodation after the lieutenants, masters, and in some cases after the junior-lieutenant of marines, as happened very recently in a ship at Malta. He shares prize money with his junior, and wears the same uniform as his senior assistant. The boatswain and carpenter receive the same prize money, while the captain of marines, the lieutenant, engineer! etc.,

are allowed a considerably larger proportion; these officers being all his juniors in rank. The "Surgeon," before becoming a "Staff-Surgeon," is obliged to serve twenty long years on full pay; seldom attains that rank before he is nearly fifty years of age, owing to the want of continuous employment in the navy, then receives no commission as such, nothing to show that he is an officer of high rank, in case he is taken prisoner, etc. The Staff-Surgeon is denied a separate list in the official "Navy List;" has no better cabin than his captain's steward; has no servant; and shares prize money as his junior assistant, viz., with the boatswain. The very title is objectionable, as a young Assistant-Surgeon in the army, just promoted on the staff, holds the same, while the masters, paymasters, and engineers, all attain a corresponding rank after being fifteen years in the service without necessarily serving *one day!* With a new title the junior receives a commission, and this title is one which marks the increased rank. In the army the Surgeon has a choice of quarters according to his rank; prize money, allowances, etc., are paid on the same scale. The Surgeon-Major receives a commission; has a separate column in the "Army List," and occupies quarters, etc., according to his rank. In the French service the Surgeon is treated in every way according to his rank, and in a flag-ship messes not with the captain but with the admiral. The uniform of the Medical Officer confounds him with the engineer and paymaster, while the universal wish is to have one completely distinctive.

I will briefly subjoin what we ask to make our position at all bearable:—

1. The full recognition of rank as conferring choice of cabin accommodation, allowances, prize money, the attendance of servants, etc., on *all* Medical Officers.
2. That the uniform may be changed. In foreign services (French, etc.), the Medical Officer is distinguished by purple cuffs on the coat; the number of stripes indicating his rank, and this appears to be a sufficient indication.
3. That "Staff-Surgeons" for the future be called "Surgeons-Majors," receive commissions as such, and be allowed the privileges corresponding to his rank.
4. That seniority and long service alone entitle a Medical Officer to civil appointments, and guard ships, etc.
5. That distinguished service should lead, as in the army, to promotion to the inspectorial ranks; and that the number of deputy-inspectors on the list be considerably more.

Your readers will, I feel certain, appreciate the disadvantages I have so briefly alluded to, and lend us, with yourself, assistance in gaining the above moderate demands.

I am, &c. "PIRDUS."

MEDICAL NEWS.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, October 8, 1863:—

Walter Jones, Llanailin, Oswestry; Thomas Sheldon, Stratford-on-Avon; Leonard Emanuel, 6, Stanley-gardens, Notting-hill; Robert Foreman Cook, Gateshead-on-Tyne; Joshua James, Bristol; Michael Beverley, Serthing, Norfolk; Robert Harrison, Nether Levens, Milnthorpe; Charles Marshall Kempe, Augusta-place, Clapham-road; Frederic Morley, Bicker, Lincolnshire; Hugh Taylor, Norwich; Richard Turner, King's College.

The following gentlemen also on the same day passed their First Examination:—

William Nathaniel Hiron, Sydenham College, Birmingham; Edward Carpenter, St. Thomas's Hospital.

QUEEN'S UNIVERSITY IN IRELAND—At the annual meeting of the above university, held in Dublin Castle on Tuesday, October 13, the following gentlemen received the degree of M.D.:—First Class—Anthony H. Corley, Queen's College, Galway. No second class. Third Class—Thomas G. Bolster, Cork; George J. H. Evatt, Galway; John W. M'Cloy, Belfast. Unclassed—James Barry, Cork; Thomas D. Bromlow, Galway; William A. Browne, Belfast; John G. Coulter, ditto; Frederick F. Dickinson, Galway; John F. Hartland, Cork; William R. G. Hinds, Galway; John H. Hughes, ditto; John A. Macdonald, Belfast; Patrick F. M'Gloin, Galway; Joseph M'Kenzie, Belfast; Eugene V. M'Swiney, Cork; Arthur Mussen, Belfast; Joseph Nelson, ditto; Eugene R. O'Brien, Cork; Pierce G. Power, B.A., ditto; Ferdinand A. Purcell, ditto; William Roe, Galway; Samuel Rooth, Belfast; James J. Ryan, Cork; John A. Shaw, Galway; William J. Taggart, B.A., Belfast and Galway. The degrees were conferred by the Right Hon. the Lord Chancellor of Ireland, Vice-Chancellor of the University; the medals and prizes were presented to the successful competitors by his Excellency the Lord Lieutenant. Owing to the recent death of his grace the Archbishop of Dublin, who was a member of the senate of the University, the attendance was not so large as usual.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BRACEY, W. A., M.R.C.S. Eng., has been elected House-Surgeon to the Birmingham and Midland Eye Hospital.

CORRIE, JAMES J., M.R.C.S. Eng., has been elected House-Surgeon to the Leeds Fever Hospital and House of Recovery.

COWAN, ROBERT, M.D. St. And., has been elected Secretary of the Glasgow Faculty of Medicine for 1863-64.

DUCKWORTH, DYCE, M.D. Edin., has been appointed Resident Physician to the Clinical Wards, Royal Infirmary, Edinburgh.

FAGGE, C. HILTON, M.D. Lond., has been appointed Physician to the Royal Infirmary for Diseases of Children and Women, Waterloo-road.

HARLEY, JOHN, M.D. Lond., has been appointed Assistant-Physician to King's College Hospital.

HICKS, J. BRAXTON, M.D. Lond., F.R.S., has been appointed Physician to the Royal Infirmary for Diseases of Children and Women.

HOLDEN, JOHN, M.R.C.S. Eng., has been appointed House-Surgeon to the Ardwick and Ancoats Dispensary, Manchester.

MCCARRON, JOHN, L.F.P.S. Glasg., has been elected President of the Glasgow Faculty of Medicine for 1863-64.

MCINNES, JAMES, L.F.P.S. Glasg., has been elected Treasurer of the Glasgow Faculty of Medicine for 1863-64.

PADFIELD, FRANCIS J., M.B., has been appointed Junior House-Surgeon to the Liverpool Northern Hospital.

PEACOCK, ALBERT L., has been appointed Resident Medical Officer to the St. Marylebone General Dispensary, Welbeck-street, W.

RANSOM, ROBERT, M.D. St. And., has been appointed Surgeon to the Cambridge Borough Police.

RAYNER, WILLIAM, M.R.C.S. Eng., has been elected Assistant Resident Medical Officer to the Leeds Public Dispensary.

THOMPSON, THOMAS, M.R.C.S. Eng., has been appointed House-Surgeon to the Queen's Hospital, Birmingham.

WILSON, JAMES GEORGE, M.D. Glasg., has been elected to the Andersonian Chair of Midwifery.

YOUNG, WILLIAM, M.D. Glasg., has been elected Vice-President of the Glasgow Faculty of Medicine for 1863-64.

DEATHS.

BELLAMY, Dr. GEORGE, at Plymouth, late Surgeon R.N., on October 11, aged 90.

CHAWNER, DARWIN, M.D. Edin., at Minster-yard, Lincoln, on October 1.

MACDONALD, JOHN J., L.R.C.S.I., at Kilbeggan, Co. Westmeath, on September 16.

RALFS, EDWARD, M.R.C.S. Eng., at 27, Burton-crescent, London, on October 9, aged 47.

SAYER, WILLIAM, M.D., at Great Homer street, Liverpool, on September 28, aged 32.

SPENCE, JOHN, F.R.C.S. Eng., of Otley, Yorks, at Stafford-street, Edinburgh, on October 4.*

SPENCER, R., Civil Surgeon, at Nassick, on August 8, aged 64.

WELLS, JOSEPH, M.R.C.S. Eng., at Stanley-place, Paddington, on August 31, aged 65.

INCREASE OF TYPHUS IN THE METROPOLIS.—We hear that a large increase has taken place during the last two months in the typhus cases admitted at the London Fever Hospital. The cases, we believe, are generally from the eastern districts of London. It is reported that the number of cases treated has more than doubled since August 1.

MORE DEATHS IN CENTRAL AFRICA.—Dr. Dickenson died on March 17 from an attack of malignant bilious fever. Mr. Richard Thornton, a geologist, attached to Dr. Livingstone's expedition, died of dysentery and fever on April 21. Dr. Livingstone, in a letter to Sir R. Murchison, says, "the scene of desolation around us reacts on my health badly."

WE are glad to notice, on the authority of *l'Union Médicale*, the foundation at Auteuil, near Paris, of a new *Maison de Retraite*, or *Hospice*, of 100 beds, the site, construction, and endowment of which will cost £60,000, or 1,500,000 francs. This munificent endowment is the free gift of M. Chardon-Lagache, and is intended as a perpetual monument in honour of his father, M. le Docteur Chardon, who has for many years been the Physician of the poor of Auteuil. May he live long to witness the good effects of his son's pious munificence.

Discovery of a "Caxton" in the Library of the Royal College of Physicians.—We hear that one of the earliest works issued by Caxton—his "Recuyell of the Historyes of Troye"—has been discovered on an upper shelf in the library of the College of Physicians.

Action against the Treasurer of the Medical Registration Society.—An action was brought in the Westminster County-court on the 9th instant, by Mr. Gough, Solicitor to the Medical Registration Society, against the Treasurer, Mr. Lavies, of Great George-street, Westminster, to recover the sum of £15, said to be due for rent. The payment of the sum was admitted, but accepted by Mr. Gough as for "costs;" the cheque was, however, produced, and showed clearly that it was drawn for rent. The judge directed that the plaintiff be nonsuited, with costs. It seems hard upon Mr. Lavies that, after having devoted his time and influence for the promotion of an object intended to benefit the Profession, he should, because he happens to be the Treasurer of a Society, be made personally liable for that Society's debts. Their amount is not very great, and a little general co-operation would easily discharge them.

Pharmaceutical Society of Great Britain.—The Sessional Prizes, with the Herbaria and Pereira Medals, and Jacob Bell Scholarships, were distributed at a meeting held at the house of the Society, on Wednesday evening, the 7th. Mr. Hills, Vice-President, in the chair. *Chemistry and Pharmacy*—Michael Carteighe, Medal; Charles Umney, Certificate of Honour. *Botany and Materia Medica*—Michael Carteighe, Medal; John Watts, Certificate of Honour; Charles Umney, Certificate of Honour; Jonathan Phillips, Certificate of Merit. *Practical Chemistry*—Charles Umney, Medal; Henry A. Peele, Certificate of Honour; John Bourdas, Certificate of Merit. *Pereira Medal*—Michael Carteighe. *Herbaria*—Thomas Harrison, Silver Medal; Edward M. Holmes, Bronze Medal; Henry Medd, Certificate of Honour. *Junior Bell Scholarships, value £30 per Annum, with Free Laboratory Instruction*—John Watts, Frederick E. Passmore. Mr. Hills presented to the Society a marble bust of the late Jacob Bell, by T. Butler, which was recently exhibited at the Royal Academy.

Introductory Lecture at Queen's College, Birmingham.—The Medical Session was opened on October 1 by Mr. Furneaux Jordan. The lecturer chose for his subject "The Elevation of Medical Science in the Estimation of Society." We regret that our space will not allow us to give an abstract of his able and original address. The concluding passages, however, will convey an idea of the lecturer's vigorous tone of thought and expression:—"If commerce, politics, law, and theology prosper best in cities, it is not necessarily so with Medical science, at least with many of its phases. The microscope, the chemical test, and the observing mind may be carried into a wilderness. The diseases of the Medical world form an important branch of knowledge, at present almost unentered, and yet how much light might a well-studied inflammatory action in a wounded blade of grass throw upon the greatest question of modern pathology, the process of inflammation in the animal tissues. An eminent thinker has drawn forcible attention to an important means which is essential to the progress of all science; it is especially applicable to the science of Medicine, the more so because in this department of research it has been too much neglected. The means I allude to is a systematic and complete disregard for authority. It is put thus:—All progress is preceded by inquiry, and all inquiry is preceded by doubt. A golden maxim, at least for a Medical labourer, is—doubt all things that are not proved. By this means alone is the growth of proven knowledge secured. For only doubters originate, only doubters advance, only doubters annihilate doubt. The most thoroughly efficient means, however, by which any science is advanced lies in the perseverance and zeal of the individual workers. Here I may fitly speak a word to those who are seated for the first time on the benches before me. I would earnestly impress upon you not lightly to enter on the study of Medicine—not unless you have an almost passionate ardour for science, for the study of its laws, for the desire of its progress; not, above all, unless you have well considered that the mysteries and the organisations of this life are worthy of the exercise of the highest faculties which men possess. Human existence is every day assuming sterner aspects. The aggregate of educated men are every day becoming less tolerant of mediocrity and pretence. Life is short, and we can permit only the subtlest poets to stir our deeper feelings—only the keenest-sighted historians to record the import of our lives—only the profoundest philosophers to penetrate our psychical depths. But there is consolation for all. Science sheds her brightness over the least of her votaries. She accepts the greatest offerings and the meanest. She aims at the loftiest objects and the lowliest. Science is still young, and is only now taking the earlier steps in the long journey which stretches before her. But even now her gaze pierces the thickly-crowding centuries, and her eye reflects some of the lustre of that bright era when her sceptre will be supreme and her dominion illimitable. To help to bring quickly that great time is a godlike privilege. Every man may claim it."

Treatment of Pneumonia by Acetate of Lead.—Professor Leudet, of Rouen, in this paper gives the results of his employment of the neutral acetate of lead in 40 cases of pneumonia in Hospital patients, for the most part of weak constitutions. Of these, 37 were cured and 3 died. The dose employed varied from a minimum of 1½ grain to a maximum of 12 grains per diem, the total quantity of the salt administered during the whole period of treatment varying from 7½ grains to 78 grains, the mean quantity having usually varied from 30 to 60 grains. It was always given in pills, and the mean duration of its employment was six days. The mean duration of pneumonia treated by lead was twelve and a-half days. In more than one half the cases the lead gave rise to diarrhœa. At the commencement of the treatment the author recommends that the dose should be from 6 to 9 grains per diem, which induce a rapid and persistent depression of the pulse, and lead to a speedy resolution. Convalescence under this treatment is of speedy occurrence, the appetite being restored as soon as the fever has disappeared, even when resolution has not advanced. Strength is rapidly recovered.—*Bull. de Thérap.* vol. lxiii., pp. 385-94.

BOOKS RECEIVED.

A Dictionary of Chemistry. Part 8. By **Henry Watts, B.A.**, F.C.S. London: Longman and Co. 1863.

⁂ This number extends from Cyanic Acid to Electricity, the latter subject being only partially contained in it. It fully sustains the high reputation of the work.

The Diagnosis and Treatment of Diseases of Women, including the Diagnosis of Pregnancy; founded on Lectures delivered at St. Mary's Hospital. By Graily Hewitt, M.D. London: Longman and Co. 1863.

⁂ A handsome volume of 628 pages, apparently full of well elaborated matter, of which we shall give a review as quickly as possible.

Illustrations of Dissections. Parts IV. and V. Coloured Plates. By George V. Ellis and G. H. Ford. London: Walton and Maberly. 1863.

⁂ We cannot too strongly recommend these "Illustrations" to our younger readers. Each Part contains sixteen pages of descriptive letterpress, forming a good commentary and guide to observation. The plates are exact representations of the actual facts observed in dissection, as they will appear to the clear and careful dissector.

Census of the British Empire. Part I.—England and Wales. London: Harrison. 1863. Price 1s. 6d.

⁂ If the writer had not been afflicted with a monomania for interlarding his work with irrelevant scraps of quotation from poets and penny-a-liners, he would have executed his task with good taste and sober judgment. As it is, he has produced a highly useful work, into which it is impossible to dip without meeting something amusing or instructive. He gives the population, its local increase or decrease, the birth, and death, and marriage rate of the various divisions and parishes of England and Wales, and a very useful introduction to vital statistics.

The Laryngoscope: Illustrations of its Practical Application and Description of its Mechanism. Illustrated with 35 wood engravings. By George D. Gibb, M.D. London: John Churchill and Sons. 1863.

⁂ This pamphlet appears to be a mere *avant courier* of a second edition of the author's work on "Diseases of the Throat and Windpipe as Seen with the Laryngoscope," in which doubtless the writer will expound the subject with fulness and ability. In contains memoranda of cases and a short account of the laryngoscope and the mode of using it.

The British and Foreign Medico-Chirurgical Review. October, 1863. London: John Churchill and Sons.

⁂ The present number is particularly good. It exhibits an excellent conspectus of all departments of our art and its kindred sciences. Hardly any topic of importance but is represented in the volume. The essay entitled "The Theory of Vitality" deserves careful study.

Portraits of Men of Eminence in Literature, Science, and Art. No. 5, October, 1863. London: Lovell Reeve and Co.

⁂ This, the fifth number of a work hitherto new to us, contains three photographs, about the *carte-de-visite* size, of Dr. R. G. Latham, Mr. William Fergusson, and Mr. Solomon Hart, R.A. The portraits are good, especially that of Mr. Fergusson. They are accompanied by brief biographical notices.

On Sufficient and Insufficient Dietaries, with special reference to the Dietaries of Prisoners. By W. A. Guy, M.B. Cantab. London: Harrison and Sons. 1863. Pamphlet.

Monthly Return of the Births, Deaths, and Marriages Registered in the Eight Principal Towns of Scotland, with the Causes of Death at Four Periods of Life. September, 1863. Published by Authority of Registrar-General.

⁂ This Return says:—"The zymotic (epidemic and contagious) class of diseases proved fatal to 727 persons in the eight towns, and this constitutes 36 per cent. of the total mortality. The prevalence and fatality of scarlatina in Glasgow, measles and scarlatina in Dundee, and small-pox and scarlatina in Greenock, caused this rate to be exceeded, however, in each of these towns. Scarlatina proved the most fatal epidemic, having caused 207 deaths (or 10·5 per cent. of the whole mortality), of which 145 occurred in Glasgow, and 34 in Dundee, being in the proportion of 15·1 per cent. of the deaths in the former, and 16·5 per cent. of the deaths in the latter town. Small-pox caused 95 deaths in the eight towns; whooping-cough, 68; measles, 55; diphtheria, 32; croup, 85; typhus (including gastric and infantile fevers), 124; diarrhœa, dysentery, and cholera, 76; metria, 7; and erysipelas, 10."

The Calabar Bean. By Thomas R. Fraser, M.D. Edinburgh: Oliver and Boyd. 1863.

⁂ A Graduation Thesis, for which the gold medal was awarded by the Edinburgh University, August, 1862.

Aperçu des Differentes Méthodes de Traitement contre la Syphilis Constitutionnelle. Par J. L. Bidenkap. Christiana: 1863.

⁂ This work, which is a valuable contribution to our knowledge on syphilis, shall receive more detailed notice in an early number.

The Popular Science Review. October, 863. London: R. Hardwicke.

⁂ The opening paper in this excellent book is illustrated by a most remarkable specimen of photo-lithography, namely, a reduced *fac simile* of a complete page of the *Times* in a space of about three by four inches. The letters are beautifully clear, and just legible by the naked eye, for a few seconds at a time. An account of the Metropolitan Main Drainage Works is furnished, with a plan of the whole system. We strongly recommend the work.

Quarterly Journal of Microscopical Science. October, 1863. London: John Churchill and Sons.

⁂ Contains, among other interesting subjects, a beautiful plate representing the distribution of fine nucleated nerve-fibres to the elementary muscular fibres of the mylohyoid muscle of the little green tree frog. It is drawn on the block by Dr. Lionel Beale, from a specimen magnified 1700 diameters by means of a one-twenty-fifth of an inch object-glass of Messrs. Powell and Lealand.

Edinburgh Medical Journal. October, 1863. Edinburgh: Oliver and Boyd.

⁂ The October number of this periodical contains information regarding the requirements in preliminary and professional education of the various licensing bodies, and other matter valuable to students, as well as interesting original communications.

Edinburgh Veterinary Review. October, 1863. Edinburgh: Maclachlan and Stewart.

⁂ Papers on the Administration of Chloroform to Parturient Cows, on Pleuro-pneumonia in Cattle, and several communications respecting parasites in domesticated animals, give this number a more than usual interest to the pathologist.

Homœopathic Statistics. By Frederick Smith. London: H. Turner and Co. 1863.

⁂ A very feeble pamphlet of eighteen pages, containing hardly any real statistics, except one, which has considerably surprised us by its smallness. It appears, on the evidence of a favourable witness, "that there are now in England about 220 practitioners, and throughout the world between 4000 and 5000, including in their ranks Professors of Universities and Physicians to crowned heads."

On the Origin of the Vaccine Inoculation. By Edward Jenner, M.D. London: C. Elfick. 1863.

⁂ An interesting reprint.

Pharmaceutical Journal. October, 1863. London: John Churchill and Sons.

The Second Medical Report of the Hospital for Consumption. London: John Churchill and Sons. 1863.

Statistical Sanitary and Medical Reports of the Army Medical Department 1861. London: Harrison and Sons, 1863.

British Journal of Dental Science. September, 1863. London: John Churchill and Sons.

Dental Review. October, 1863. London: Robert Hardwicke.

Montpellier Medical. Septembre, 1863. Montpellier: Boehm et Fils.

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

Mr. R. Griffin is thanked for his letter and the accompanying sketch.

Mr. Spender's paper has been received, and shall appear as soon as possible.

Curvatus.—We are not in the habit of answering such inquiries. Consult a respectable Surgeon, and pay him his fees.

Tissue-Cells of Hymenophyllaceæ.—In a former Number (*Medical Times and Gazette*, August 29) we noticed that there is a marked difference between the leaf-cells of the British species of *Hymenophyllum*. And now Mr. Gulliver extends his observations to, and gives engravings of, the spores and tissue-cells of the involucres, and finds them also larger in *H. Wilsoni* than in *H. Tunbridgense*, while in *Trichomanes radicans* the leaf-cells are similar to those of *H. Wilsoni*. Hence the comparatively small size of the cells of the leaf and involucre is alone sufficient to distinguish *H. Wilsoni* from its two other British allies; and little doubt remains that it is really a distinct species, notwithstanding the high authority of Prof. Bentham to the contrary. And it results, moreover, that these cells should henceforth form part of the specific characters of this beautiful order of Ferns. At all events, the facts will suggest matter for further inquiry to such of our readers, now an increasing number, as may combine the interesting and elegant occupations of fern-culture and vegetable anatomy.—*Ann. Nat. Hist.*, Oct., 1863.

Case of Triplets.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—On Tuesday last, I was sent for to a Mrs. S., wife of a sailor, Steam Reserve, and she was safely delivered by me of triplets—two girls and one boy; one of the girls was still-born. They are all as yet progressing favourably. The first presentation was a breech; second, head; third, footling. The placenta came away directly after the birth of the last child. I am, &c.

Portsmouth, October 8. William H. Castle.

Liability of Surgeons to Serve on Juries.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The question has been often asked, Is a Surgeon in practice liable to be called on to serve on juries? The answer generally given is to "show your diploma." This appears, according to vestry law, not to be sufficient. My name appears on the Jury lists. I made my appeal, but was informed that as I had not appealed on the day appointed for that purpose, I was still liable for the remaining term. If that is the correct reading of the Jury list, any number of Surgeons may be summoned to serve on juries, in defiance of a special act of the Legislature passed to disqualify them.

I shall be obliged by any of your readers acquainted with the correct ruling of the points at issue, stating their opinion. I am, &c.

"Jury List."

Vesical Catarrh.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—If Dr. Moriarty will inject his patient's bladder with undiluted carbonic acid gas, and leave it there, to be expelled at will, I will promise him complete success in removing the pains and the frequent micturition. For my own method of administration, see *British Medical Journal*, 1858, page 440, *et seq*. Although my apparatus there described has been greatly improved, my views as to the safety and efficacy of the means are decidedly confirmed by a very considerable experience. The powder of uva-ursi in doses of ʒj. thrice daily in cold water, or linseed-tea, is the best adjuvant.

I am, &c. Thos. Skinner, M.D.

1, St. James-road, Liverpool, October 14.

Obscure Puffery.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I beg to call your attention to a custom of the low penny papers; they act, through their "Notices to Correspondents," as a sort of oracle to their readers, and give answers to the questions put about love, disease, freckles, bad breath, faithful wives, and such other topics as may be supposed to interest the maid-of-all-work class. Here are specimens from a low "sensation" weekly paper:—

"*Evan W.*—You must consult some clever Physician for king's evil. We can recommend Dr. Marsden, of No. 65, Lincoln's-inn-fields.

"*Freckled Face.*—Our fair correspondent says that she is naturally 'a sweet pretty girl,' as all her male friends assure her, and that she was wont to possess a fair and clear complexion, but latterly she has become so freckled upon the forehead and nose, and so sallow on the rest of her face, that she is really 'a fright.' Thus does our correspondent bewail her 'hapless lot,' and all the more so because she is losing her 'beaux.' Of course she requires our advice. . . The remedy afforded is twofold. It consists only of a certain medicine and a careful diet. The medicine is the Cutaneous Pills, sold by T. Walter, No. 8, Grafton-place, Euston-square, price 1s. 2d. per box, post free.

"*Defective Vision and Red Hair.*—A lady correspondent propounds the following: 'Why gentlemen with red beards are generally apparently afflicted with defective vision? I cannot account in any other way for the rude stares one receives from gentlemen "in red."'

"*Z. Y. X.*—We refer you to the 'Golden Book,' published by W. Strange, Paternoster-row, price 4d, post free.

"*T. P. C.*—To cure ulceration in the throat, and, indeed, to cure any affection of the throat or chest, you should take the Pectoral Pills, price 1s. 2d. per box, post free, sold by Mr. T. Walter, No. 8, Grafton-place, Euston-square.

"*A Sufferer.*—Mr. Harvey's admirable work on 'Diseases of the Throat, and Deafness,' is published by Renshaw, Strand.

"*A Tipperary Boy.*—You evidently are not qualified, by education, to become an actor. You could have the operation performed on your eye, without any fee, at Guy's Hospital, by the celebrated Mr. Poland."

I need not comment on this mass of vulgarity, except to notice how much the charity of Guy's Hospital must be abused if the oracle is right.

I am, &c. Beta.

The Physiognomy of Frankenstein.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am in all the horrors of a great calamity, from which I can't extricate myself, but which a charitable feeling prompts me to make public, in hope that others may be more wary and fortunate than myself. Some time ago a seedy individual made his way into my consulting-room, and told me that he was agent for Messrs. Scrape and Scratch, the great artistic publishers; and that, having heard of my celebrity, etc., they wished to add mine to a series of select portraits they were publishing of members of the Medical Profession. Alas! vanity, or some lurking hopes (for though fifty I am unmarried) softened me, and I gave my consent. I sat, and sat, and sat, and at last there came a bundle of five-and-twenty proof impressions, with a little bill. Imagine my horror at seeing, instead of my own likeness, a pig-eyed, wooden-faced effigy, which I was told was much admired! Remonstrance was vain; so I paid Scrape and Scratch, and carefully destroyed the horrible Frankensteinisch similitudes. All in vain. All my friends had been plied with circulars from the publishers announcing the portrait, and many of them bought the odious thing, and have hung it up, as they think, in my honour. One day I went to see a patient whom I had never seen before, and on being ushered into the empty drawing-room, saw on the wall a pig-eyed engraved portrait, so much like my own by Scrape and Scratch, that I thought it was mine, till, on going nearer, I saw the name of an engineer captain underneath. I then saw the dodge. They have one style, pig-eyes, wooden face, and all; and their way is to get men to sit, issue circulars wholesale to all their sitter's friends, and so get them to give orders for what is truly a pig in a poke. I am, &c. Vitulinus.

Cases of Diffuse Inflammation of the Arm.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Perhaps the two following cases of diffuse inflammation of the arm may be of sufficient interest to obtain a place in your valuable paper. Unhappily, through neglect, the first proved fatal, thus showing that the natural course of the disease when left to itself was towards a fatal termination; the second recovered, and serves to illustrate the success of the treatment adopted.

The first case I can only give briefly, as the patient was not under my care. Mrs. T., while working at the harvest, on September 5, pricked her finger with a stubble. Inflammation speedily set in, and so rapid was its progress, that the woman died on the 10th, or five days from its commencement. She was seen by a Medical man on the second day of the disease, who strongly advised her to come into the Hospital; this she promised to do, but did not, and most unaccountably allowed the mischief to go on unchecked till within six hours of her death, when a Doctor was again called in; but there was now no hope; the whole limb was one mass of mortification, extending beyond the shoulder, and involving the muscles of the chest.

The second case is that of the woman's husband, which I will give at greater length, as I took daily notes from the time he entered the Hospital.

On the morning of the 13th, or the third day after his wife's death, he felt a sharp stinging pain in the back of his hand, immediately above the knuckle of the middle finger, where there was a small scratch visible. The part very soon became red, swollen, and tense. This was followed by the formation of a small vesicle, and by the afternoon of the same day the disease had extended beyond the wrist; the whole hand was extremely painful, nearly double its natural size, tense and hard to the feel, and of a dusky red hue, the spot where it first began appearing like a tumour, the size of an egg, above the rest of the hand. He applied poultices, vinegar, red cloth, etc., for a couple of days, but the inflammation steadily advanced, and he was admitted into the Hospital on September 15, 1863.

State on Admission.—The arm, from the tips of the fingers to midway between the elbow and shoulder-joints, was swollen to fully a-half larger than the corresponding one, hard and tense to the feel, of a dusky red colour, and extremely painful, which the slightest movement increased. The back of the hand is more swollen than the rest, and boggy. Into this part I at once made a deep incision, of about two inches in length, which gave exit to a large quantity of a thin serous fluid, but no pus; the cellular tissue, however, was very white, and infiltrated with coagulated lymph, which showed pus cells under the microscope. The rest of the arm was now painted over with tinct. of iodine, and a large soft poultice applied, in the hope that resolution might take place; but, as might have been anticipated, this was far from the result. Above the disease, and apparently on sound tissue, solid nitrate of silver was drawn round the arm, so as to form a ring of about half an inch in width; this was done with the hope that the disease might not extend further up the arm.

General Health.—Pulse 120, extremely weak and feeble; skin hot and dry; face much flushed; tongue dry, and covered with a thick, white fur; has had no appetite since the disease began: is often nauseated; his bowels are quite regular, but they were loose for the first two days; feels very weak. Ordered ℥viij. whisky daily, with beef-tea, and good nourishment.

16th.—Slept better last night than he has done since he took ill; there is not so much sickness this morning, the whisky he says puts it away. His tongue is still dry and furred; bowels opened once; pulse 120, feeble; skin hot and dry. Arm.—The hand is much softer, and not so painful; the arm, however, is worse, the pain is more severe, the swelling is more tense, and the inflammation has extended above the caustic line. There is a large fluctuating swelling over the olecranon, into which I made an incision; twelve other smaller incisions were made in various parts of the arm, from which escaped a great quantity of serous fluid. Poultice. Another rim was made with the nitrate of silver about three inches above the first.

17th.—Slept none till about three o'clock this morning, when he fell into a sound slumber, which lasted for nearly six hours. He does not feel sick at all, but was not able to eat anything at breakfast. Arm.—Not so painful nor so hard to-day; no difference in the swelling; there is distinct fluctuation, however, over the front of the wrist, into which I made an incision about two inches long, and another smaller one on the outer side of the arm a few inches above the elbow, where it felt rather hard and tense; pus escaped from both places. Pulv. opii., gr. ii. at night.

18th.—Slept well during the night, and feels refreshed this morning; has not complained of sickness since yesterday; pulse stronger. Arm.—The disease seems to have extended very little further; the swelling is rather less; the limb is not so tense, and there is not nearly so much pain. An immense quantity of fluid escaped during the night, soaking through the poultice, and forming a stream on the floor. I had to make another opening in the outer side of the fore-arm at its middle third, the part being more painful and more tense than elsewhere; here, as in every other place that has been incised, the cellular tissue is infiltrated. Pulv. opii., gr. i. at night.

19th.—Rested well, and was able for some breakfast this morning. Pulse, 100, stronger; tongue cleaner. Arm.—The swelling has fallen considerably; the pain is much less; the limb feels softer everywhere, except over the back of the wrist and over the front of the biceps at its middle. Into these places I made two small openings, and let out some pus.

20th.—The disease is now fairly on the decline; there was a great discharge of serous fluid mixed with pus during the night; the swelling is much down in consequence; says he feels very little pain; can lift up the limb and move the fingers.

The patient has steadily improved from this date without a bad symptom, and is now almost well. One or two small openings were made where there appeared any indication of matter, or where the patient complained of extra pain. The discharge gradually lost its serous character, and became more puriform. As there was a good deal of sloughing of the cellular tissue, giving rise to an offensive smell, charcoal poultices were used, and found very effectual in correcting it.

I think we may fairly conclude that the husband was inoculated from his wife; he attended her, and changed the poultices on her arm, and, after she died, laid her out. But it is not so easy to account for the disease in the woman. Both, I understand, have been inveterate drinkers for years, which must have brought their constitutions into such a bad state that any disease would be prone to assume an asthenic form, but the mere prick of a stubble could scarcely cause so much mischief without something else helping it. There was a case of erysipelas next door to where the woman lived, and she may have had the poison of erysipelas in her blood at the time she got the prick, so that the force of the disease may have expended itself in the arm; but this is a mere conjecture.

Now, as regards the treatment in this case, it will be seen that it consisted mainly of two things—first, good nourishment, with plenty of stimulants; and secondly, free use of the knife. We should not wait till matter has formed, but rather, by free and deep incisions, try if possible to prevent its formation at all; the pain is very trifling indeed compared to the relief it affords. To procure rest and allay irritability, opium will be found invaluable. For correcting the offensive smell, I found the charcoal poultice most effectual. One other remark and I have done. It is as to the propriety of amputation in these cases; this will rarely be required if the disease be seen in time, and early incising practised; but if, in spite of everything, it steadily advances, I would most assuredly give my patient the chance of an operation, by removing the arm at the shoulder-joint while there was yet time. I am, &c.

Gray's Hospital, Elgin, October 6. Geo. Whyte, M.D., etc.

COMMUNICATIONS have been received from—

Dr. G. Elin; Mr. C. C. Atkinson; Dr. Leared; Dr. John Barclay; Dr. Angus Fraser; Mr. Charles Hunter; "Jury List;" Apothecaries' Hall; Dr. W. H. B. Castle; Mr. Fletcher; Dr. C. L. Robertson; Dr. G. Whyte; Mr. E. Bremridge; The Liverpool Southern Hospital; Mr. Pitt, the Middlesex Hospital; Mr. C. Bader, Guy's Hospital; Hertford Infirmary; Mr. Leach; The "Dreadnought;" Mr. Charles J. Evans; Dr. Devenish; Dr. G. R. Sheraton; Dr. Michael T. Sadler; Mr. R. B. Carter; Dr. C. B. Garrett; Mr. R. Griffin; Dr. Thomas Balman; Vitulinus; Beta; Mr. Henry Thompson; Curvatus.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 10, 1863.

BIRTHS.

Births of Boys, 962; Girls, 911; Total, 1873.
Average of 10 corresponding weeks, 1853-62, 1652·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	624	634	1258
Average of the ten years 1853-62	537·7	516·1	1053·8
Average corrected to increased population..	..	..	1126
Deaths of people above 90	1	..	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	4	5	12	1	2	5	6
North ..	618,210	10	2	41	2	6	10	5
Central ..	378,058	6	2	20	2	2	6	7
East	571,158	5	2	25	1	8	12	5
South ..	773,175	6	6	48	..	6	18	7
Total.. ..	2,803,989	31	17	146	6	20	51	30

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·609 in.
Mean temperature	53·3°
Highest point of thermometer	66·5
Lowest point of thermometer	37·5
Mean dew-point temperature	49·3
General direction of wind	S.W. & S.E.
Whole amount of rain in the week	0·44 in.

APPOINTMENTS FOR THE WEEK.

October 17. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

19. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

Medical Society of London, 8½ p.m. Meeting.

20. *Tuesday*.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

Pathological Society. Meeting.

21. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

Hunterian Society, 8 p.m. Mr. Hutchinson, "On the supposed Effect of Tobacco in producing Amaurosis."—Adjourned Discussion.

22. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

23. *Friday*.

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

◆

PROFESSOR HUXLEY'S LECTURES
AT THE
ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

IV.—*The Skulls of Fishes.*

(C.) *The cranium, consisting chiefly of cartilage and without cartilage bones, but with superadded membranous bones.*

The skulls of the chondrosteous Ganoids, the Sturgeons, and *Spatulariæ* exemplify this type of structure, which forms a most interesting transitional link between the skull of Plagiostomes and the skull of ordinary osseous fishes.

Spatularia has a completely cartilaginous skull produced in front into a great beak, flattened from above downwards. The cartilaginous representatives of, at fewest, seven of the anterior vertebræ of the spinal column coalesce into one mass with one another and with the skull. The notochord, extremely large in the spinal column, rapidly diminishes in size as it enters the skull, and, becoming a mere thread, terminates behind the pituitary fossa. The auditory organs are contained in large postero-lateral projections of the cranial mass, with the outer sides of which the suspensoria are connected. The base of the skull is protected by a long parasphenoid, which extends back under the anterior part of the spinal column; in the dorsal region it presents an anterior and a posterior pair of periçhondrial ossifications, separated by oblong laminæ from lateral bony plates of the same character, but the homology of these bones with those in the roof of the Teleosteon skull is not, to my mind, satisfactorily made out.(a)

FIG. 34.

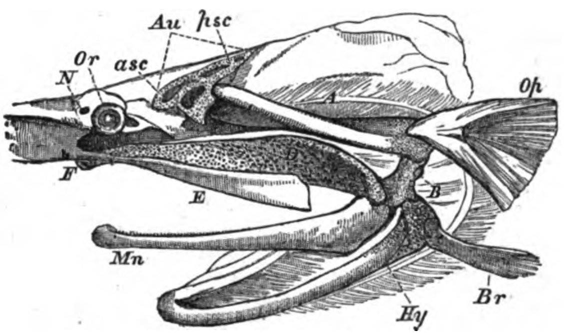


FIG. 34.—Side view of the skull of *Spatularia* with the anterior (*a s c*) and posterior (*p s c*) vertical semicircular canals exposed. *Au*, the auditory chamber; *Or*, the orbit with the eye; *N*, the nasal sac; *Hy*, the hyoidean apparatus; *Br*, the representatives of the branchiostegal rays; *Op*, the operculum; *Mn*, the mandible.

The suspensorial apparatus of *Spatularia* consists of a single bone (*A*), compressed from above downwards superiorly, and from side to side inferiorly, with a superior and an inferior cartilaginous epiphysis; to the lower cartilaginous epiphysis the operculum (*Op*) is attached, and a short thick prismatic cartilage (*B*) is united by ligament with, and can play freely upon, its anterior and inferior angle. Posteriorly the lower end of this cartilage (*B*) is connected by ligament with the hyoidean arch (*Hy*), which consists of two portions on each side; a small upper piece, with which the flat bone (*Br*), representing a branchiostegal ray, is connected; and a long lower ramus, the middle third of which is bony, while the two ends are cartilaginous.

Anteriorly, the lower end of the inferior suspensorial cartilage (*B*) is united by ligaments to two cartilaginous semi-arches (*D* and *Mn*) of which the upper (*D*) is articulated by a transversely convex head with a concavity of the lower (*Mn*). The upper semi-arch is ligamentously united to its fellow in the middle line, and is suspended by ligamentous fibres to the under part of the prefrontal region of the skull. A long flat bone (*E*), the hinder end of which is cut off in the specimen figured, lies on the outer side of the cartilage (*D*), and extends to the middle line. A second long flat bone is closely applied to the inner surface of the cartilage and follows its curves from the hinder to the anterior extremity, overlapping and folding over the upper edge of the anterior three-fifths of the cartilage. Between the hinder part of (*E*) here cut away, and (*D*) is a space occupied by the levator muscle of the lower jaw.

The mandibular cartilage extends to the symphysis, and is coated externally, and partially embraced by, the flat bone (*Mn*), the greater part of the upper edge of which bears teeth.

On comparing these parts with those of the corresponding apparatus in the embryonic fish, it becomes clear that the pieces (*A*) and (*B*) answer to the hyomandibular and symplectic, taken together. Indeed, at first sight (*A*) supporting as it does the operculum, seems to answer to the hyomandibular, and *B* to the symplectic itself; but then it may be suggested that the hyoidean apparatus is attached at the distal end of (*B*), and not between it and *A*, as it would be if the two corresponded, respectively, to the hyomandibular and symplectic.

The cartilage (*D*) obviously answers to the palato-quadrate arch, and that of the lower jaw to Meckel's cartilage. The fact that a levator muscle of the lower jaw passes between (*E*) and (*D*) seems to prove the former to correspond with a maxilla, and in that case the internal bone would be a sort of palato-pterygoid, similar to that we shall meet with in *Lepidosiren*.

The skull of the Sturgeon (*Accipenser*), like that of *Spatularia*, is greatly enlarged, posteriorly, by the coalescence with it, and with one another, of six or seven of the anterior vertebræ. In front, it is prolonged into a triangular snout or beak (*c*, Fig. 35, *a*, Fig. 36), the wide base of which is formed by the antorbital, or prefrontal, prominences which separate the olfactory chambers from the orbits. Behind the latter are the two great projections (*c*, Fig. 36) which contain the auditory organs, and behind these again, and separated from them by a deep lateral fossa, are two wing-like processes (*b*, Fig. 35), which are directed outwards and obliquely backwards, and proceed, not from the walls of the cranium proper, but from those of the spinal column where it joins the skull. At this point there is, in the cranio-spinal cartilage of both the Sturgeon and the *Spatularia*, a great dilatation of the neural canal, which is closed above only by a membranous fontanelle. The skull proper has no such fontanelle. There is a well-marked pituitary fossa, and the notochord, very thick in the spinal column, tapers to a thread as it enters the base of the skull, and ends behind this fossa.

The bones which are developed in relation with this cartilaginous cranium in the base of the skull are,—a great parasphenoid which extends back under the coalesced anterior vertebræ, and forwards to the level of the nasal cavities; and a slender median bone in front of this, which underlies the rostral prolongation (*c*), and appears to represent the vomer.

No distinct ossifications protect the lateral walls of the skull, but the bones marked (*F*, Fig. 35) send down processes for a short distance, and the parasphenoid gives off transverse prolongations upwards and outwards, from each side of the middle of its length, as in most fishes.

The roof of the skull presents a number of distinct flat ossifications, no one of which involves the subjacent cartilages, and which vary very much in contour and extent in different specimens. The general arrangement is, however, fairly represented by the accompanying figure (Fig. 35).

FIG. 35.

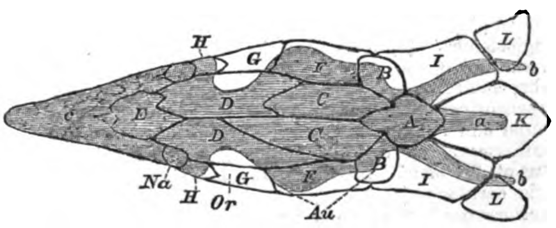


FIG. 35.—The cartilaginous skull of a Sturgeon, with the cranial bones. The former is shaded, and is supposed to be seen through the latter, which are left unshaded. *a*, ridge formed by the spinous processes of the anterior vertebræ, which have coalesced with one another and with the skull; *b*, lateral wing-like processes; *c*, rostrum; *Au*, position of the auditory organs; *Na*, position of the nasal sacs.

(a) See "Spatulariarum Anatomiam descripsit Tabulaque illustravit Albertus Wagner." Berolini, 1848.

Of these bones, the pair (*C*, *C*) and (*D*, *D*) clearly represent, both in position and character, the parietal and frontal bones of the Pike; while *F*, *F* similarly correspond with the squamosals of that fish.

In position, again, (*E*) answers to the ethmoid, (*H*, *H*) to the prefrontals, (*G*, *G*) to the post-frontal, (*B*, *B*) to the epiotics, and *A* to the supra-occipital of the Pike. But every one of these is a membrane bone, and not, as are the corresponding elements of the Pike's skull, a cartilage bone.

These bones are therefore, strictly speaking, the analogues, and not the homologues, of the bones to which they appear to answer in the Pike, though hitherto no distinction has been drawn between the two.

(*K*) and (*I*, *I*) are bones which do not properly belong to the skull, but which, as happens among many Siluroid *Teleostei*, are anchylosed with the cranium. (*K*) is the most anterior of the median dermal scutes, and (*I*, *I*) are the supra-scapular bones. (*L*, *L*) indicates the scapular bones movably united with these last.

The suspensorium of the Sturgeon consists of a large, irregularly-prismatic body, composed of a bony central piece (*f*, Fig. 36) with two cartilaginous epiphyses, the lower of which is much the longer, and is connected by ligament with another cylindrical cartilage (*h*), while the upper articulates with the outer and under part of the auditory capsule. Rather above the letter (*h*), the lower cartilage gives attachment to a cartilaginous nodule with which the principal piece of the hyoidean arch is connected.

At its distal end the cylindrical cartilage (*h*) is united by ligaments to the two apparatuses *k* and *Mn*. Of these, *k* may be described as a rhomboid, composed partly of cartilage and partly of bone, and so bent as to assume a transversely arched form. Its outer angles present convex articular facets to concavities on the lower arch (*Mn*), which last, composed of a single bony ramus on each side, is undoubtedly the mandible. The cartilaginous basis of (*k*) is strengthened by eight bones, four on each side. Of these, two lie altogether external to the cartilage, and leave between themselves and it an interspace, in which the levator muscle of the lower jaw lies.

FIG. 36.

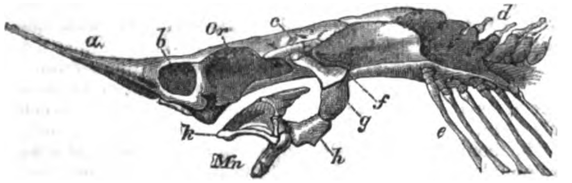


FIG. 36.—Side view of the cartilaginous cranium of *Accipenser* (after Müller). *a*, rostrum; *b*, nasal chamber; *Or*, orbit; *c*, region of the auditory organ; *f*, *g*, *h*, suspensorium; *k*, maxillo-palatine apparatus; *Mn*, mandible.

The other pair consist, firstly, of a large bone, which lies, for the most part, internal and inferior to the cartilage, and extends from the inner side of the articular process for the lower jaw, upwards and inwards, to meet its fellow, posteriorly; forwards, to articulate with the anterior of the external bones. And, secondly of a small bone fitted on to the anterior and external edge of this, and to the inferior surface of the anterior external bone. The whole apparatus (*k*) is very loosely connected with the skull, so that it is capable of being protracted and retracted with great freedom.

The general relations of this singular mechanism to the manducatory organs in ordinary Teleostean fishes appears to be rendered evident by the same method as that which has been employed to demonstrate the nature of the jaws of the Plagiostomes. (*k*) answers to the palato-quadrate arch of the Sharks and Rays, or to the palato-quadrate cartilage of the embryonic fish; and *f*, *g*, *h* corresponds with the undivided suspensorium of the Sharks and Rays, and with the hyomandibular and symplectic cartilages of the embryo Teleostean. Furthermore, on comparing (*k*) with the maxillary apparatus of *Spatularia*, the cartilaginous basis appears to answer to the cartilages (*D*, *D*) of that fish joined together; while the anterior outer bone in the Sturgeon is the equivalent of the bone *E*, and may be regarded as a maxilla. The two internal bones correspond with the inner bone of the Spatularia's jaw. The Sturgeon, however, more nearly approaches ordinary fishes in the development of an anterior or palatine element, distinct from the posterior or pterygoid element. As for the small external bone, which passes obliquely from the end of the maxilla to the outer surface of the cartilage, it is possibly a quadrato-jugal.

FIG. 37.

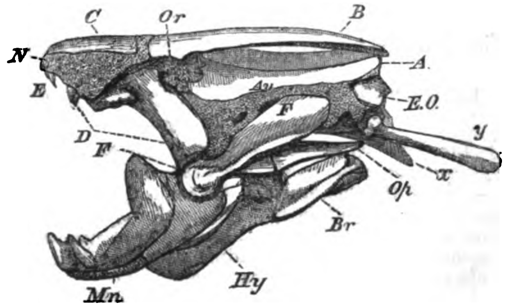


FIG. 37.—*Lepidosiren*. *A*, the parieto-frontal bone; *B*, the supra-orbital; *C*, the nasal; *D*, the palato-pterygoid; *E*, the vomerine teeth; *E. O*, the ex-occipital; *Mn*, the mandible; *Hy*, the hyoid; *Br*, the branchiostegal ray; *Op*, the opercular plate; *x*, the parasphenoid; *y*, the bone which gives attachment to the scapular arch; *Or*, the orbit; *Au*, the auditory chamber; *N*, the nasal sac.

(D.)—*The cranium consisting of cartilage to a greater or less extent, but with cartilage bones as well as membrane bones.*—The class *Pisces* presents us with a complete series of these crania, from the least ossified forms, which possess only one or two pairs of cartilage bones in the walls of the cranium to the completely ossified skulls of the Cyprinoids and Siluroids. And again, just as among the preceding groups we found that the Chimæroids differed widely from the rest in having the subocular process, or arch of the skull, to which the mandible is attached, formed of one piece of cartilage, which is continuous with, and immovable upon, the skull; so, in this series, *Lepidosiren* is at once distinguished from all the rest by a similar character.

The skull of the Mudfish (Fig. 37) is composed of a framework of cartilage, which sends down a broad triangular process, on each side, to articulate with the mandible, and expands, posteriorly and laterally, into chambers for the auditory organs. Between these, the roof and the floor of the skull are both constituted by cartilage; but anterior to them, as far as the extremity of the parasphenoid (*x*), this tissue becomes very thin or disappears (Fig. 38). In front of the anterior end of the parasphenoid, it makes its appearance again on both roof and floor of the cranial cavity, beyond which it is continued as a thin lamella to the end of the snout. A fibrous septum with a free, concave, posterior margin divides this region of the cranium into two lateral chambers, one for each olfactory lobe.

Behind the auditory chambers the cartilage is almost excluded from the walls of the skull by the two lateral ossifications of its substance—the ex-occipitals (*E*, *O*). As in the *Amphibia*, there is no ossified supra- or basi-occipital. The rest of the lateral parietes of the skull would be devoid of bony walls were it not that the parasphenoid (*x*) and the great bone (*A*), which roofs in the whole length of the skull, and answers to the frontals and parietals, send upwards and downwards respectively lateral processes, which unite together, and so replace the alisphenoid. The ethmo-vomerine cartilage (*Eth. Vo.*) bears, superiorly, the nasal bones (*C*), and inferiorly it carries teeth (*E*). A long flat bone, pointed posteriorly, (*B*, *B*) is attached to the hinder edge of the nasals; and roofs over the orbit and temporal fossa.

FIG. 38.

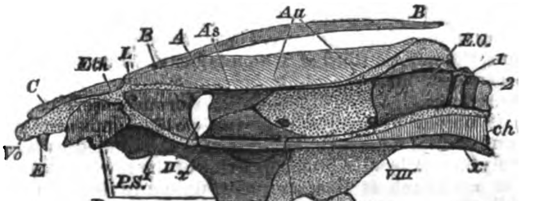


FIG. 38.—Longitudinal and Vertical Section of the Skull of *Lepidosiren*. The cartilage is dotted; the membranous and bony constituents are shaded with lines; *A*, *B*, *C*, *E*, as in the preceding figure; *x*, *x*, the parasphenoid; 1, 2, the first and second vertebral arches; *Ch*, the notochord; *Au*, the situation of the auditory organ.

The notochord, which forms the chief axis of the spinal column of this fish, is continued into the base of the skull, and ends in a point about the level of the exit of the trigeminal nerves (*V*). There is neither basi-occipital nor basisphenoid, and the presphenoid is represented only by the cartilaginous floor at (*P.S*^{1}). The pterygo-palatine apparatus is represented on each side by the great dentigerous curved plate (*D*), which is applied to the inner surface of the cartilaginous subocular process, abuts against the parasphenoid by its inner edge, and descends to the inner side of the articular condyle for the mandible (*a*). The hyoidean arch (*Hy*) is attached to the middle of the posterior and inferior edge of the subocular cartilage, to the posterior part of the outer surface of which is applied the bone (*F*, Fig. 37) with which the opercular bone (*Op*) is movably united by ligament.

The bone (*F*) has, like most of the bones of the *Lepidosiren*, a green colour. Through the greater part of its length it is so easily separated from the cartilage that it is clearly a membrane bone. Towards the condyle, however, it adheres firmly to, though, on the application of a certain force, it springs away from, a nodule of whitish bone, which lies in the very substance of the articular end of the cartilage, and repeats its pulley-like form. I suspect that this nodule, which represents the *os quadratum*, is primitively distinct from the bone (*F*). The latter, under these circumstances, would have much analogy with the pre-operculum of osseous fishes and (*Op*) would correspond with the sub- or inter-operculum.

All other fishes, comprising such *Ganoidei* as have not been already mentioned, and the *Teleostei*, have, so far as is at present known, the palato-quadrate arch primitively distinct from the hyomandibular suspensor; the latter is, primitively, movable upon the skull; and, in the walls of the cranium, the pro-otic bones, at least, are ossified as well as the ex-occipitals; that is to say, they are constructed essentially upon the plan of the Pike. The modifications they exhibit in detail are almost infinite, but a few of the most important may be enumerated:—

1. The cartilaginous cranium persists throughout life in such fishes as the Pike and the Salmon; in very many, as the Perch and the Carp, it disappears almost entirely.

2. In most fishes the *basis cranii* is compressed from side to side in the orbital region, and vertically enlarged, so as to form an inter-orbital septum, which, as it were, encroaches upon the cranial cavity and narrows it anteriorly. But in others—such as the Cyprinoids and the Siluroids—no inter-orbital septum is developed, the *basis cranii* remaining flat, and the cranial cavity of nearly equal size throughout.

3. The last-mentioned fishes have the cranial walls completely walled in by bone, distinct ossifications representing the alisphenoids and orbito-sphenoids.

4. The opisthotic bone, occasionally absent as a distinct ossification, is very small in some fishes, such as the Perch (where it is Cuvier's "*Rocher*" or "*Petrosal*"), but becomes very well developed in such genera as *Ephippus*, and attains an immense size in the *Gadidæ*.

5. The canal for the orbital muscles is absent in many fishes, such as the Cod tribe.

6. The most remarkable modification of the fish's cranium proper, however, is the want of symmetry produced in the flat fishes, or *Pleuronectidæ*, by a sort of twist, which affects the anterior and upper, but not the hinder and inferior, part of the skull. Thus, if the skull of a Turbot be examined, the supra-occipital will be found in its ordinary place, and the epiotics and squamosals are symmetrically disposed on each side of it, so that the skull, viewed from behind, is like that of any other ordinary osseous fish. The basi-occipital, parasphenoid, and vomer are likewise arranged as usual along the median basal axis of the skull. The pro-otics and post-frontals are also nearly symmetrical, but the alisphenoids are thrown over to the left side, so that the anterior aperture of the cranial cavity, between the alisphenoids, is no longer immediately over the parasphenoid, but to the left of it. The left frontal sends down a long curved process, which joins with one from the pre-frontal of the same side, and the two eyes come to lie in the secondary orbit developed between the curved bony boundary thus formed and the median frontal crest.

7. An addition takes place to the posterior extremity of the skull, in many fishes, by the anchylosis with it and with one another of a variable number of vertebræ. Cartilaginous vertebræ, as I have already pointed out, coalesce with the cartilaginous skull in both *Accipenser* and *Spatularia*, and two or three bony vertebræ are anchylosed with the osseous skull in *Lepidosteus* and *Polypterus*. Whether a similar addition takes place in the other living ganoid *Amia* or not, I cannot say. In many Siluroids a great number of vertebræ become thus anchylosed with one another and with the skull.

8. In both Siluroids and Ganoids, again, an addition to the roof of the skull is effected by the coalescence therewith of the suprascapular bones, as well as, in some cases, of dorsal dermal bones.

9. But some of the most striking modifications of the physiognomy of osseous fishes are the result of the prolongation of the region in front of the orbit, which may be effected in two very different ways. For example, it is chiefly the elongation of the premaxillæ and mandible which gives rise to the remarkable beak of the "sword-fish" (*Xiphias*); while, in *Fistularia*, the premaxillæ and mandible remain very short, but are thrust out to a great distance from the orbit by the production of the nasal and vomerine regions, on the one hand, and of the bones of the suspensorium on the other.

10. In such fishes as *Syngnathus* and *Fistularia*, a line joining the articular socket of the hyomandibular with the condyle of the *os quadratum* makes a very acute angle with the base of the skull. In most fishes this angle is more or less acute; but in *Polypterus*, and still more in *Muræna*, it becomes a right or an obtuse angle, the corner of the gape being thus thrown behind the eye, instead of being, as in most bony fishes, in front of it. We shall find a similar rotation of the distal end of the suspensorium to take place among the *Amphibia*, and in the passage from the tadpole to the adult state of the highest of these animals.

11. The connection of the palato-quadrate arcade with the hyomandibular and symplectic suspensor varies from the firm sutural union which is observed in the Pike and most osseous fishes, to a bond which is hardly closer than that which obtains in the Plagiostomes and Sturgeons, in *Polypterus*. In *Lepidosteus*, except for the inter- and pre-operculum, the tie between the symplectic and the palato-quadrate bones would be very loose, the palato-quadrate arcade and the suspensor being, as it were, naturally dissected from one another.

In some *Plectognathi* and Siluroids, on the other hand, all these parts become firmly anchylosed together, and with the side walls of the cranium.

12. Finally, the multiplication of the bony constituents of the maxilla and the mandible in *Lepidosteus*—the conversion of the maxilla into a mere support for a tentacle in many Siluroids—the absence of branchiostegal rays, and the presence of two "jugular" plates between the mandibular rami in *Polypterus*, must not be overlooked even in this brief enumeration of a few of the most salient modifications of the skulls of osseous fishes.

V.—*The Skulls of Amphibia.*

In cranial structure, as in all the other more important features of their organisation, the *Amphibia* are closely allied to Fishes, and widely separated from the abranchiate *Vertebrata*.

As in Fishes, a single median membrane bone, or parasphenoid, is developed under the base of the skull, while no such median bone is found in the higher *Vertebrata*. Like *Lepidosiren*, the *Amphibia* have no ossified basi-occipital or supra-occipital, whereas all the abranchiate *Vertebrata* possess these bones.

Again, like *Lepidosiren* and many other Fishes, the *Amphibia* have no true basi-sphenoid, developed in the cartilage of the basis cranii; while all the abranchiate *Vertebrata* have that bone well developed.

The hyoidean apparatus is, in *Amphibia*, as in Fishes,(b) connected with a suspensorium common to it and the mandibular apparatus. In all the higher *Vertebrata* the hyoidean apparatus, if it is attached directly to the skull at all, is united therewith separately and distinctly.

In all *Amphibia* which have ossified ex-occipitals, a condyle is developed on each, for articulation with the first vertebra of the spinal column; and the basi-occipital, remaining undeveloped, takes no share in the formation of these condyles. In all the higher *Vertebrata*, on the other hand, the basi-occipital takes a greater or less share in the formation of the occipital condyle, or condyles.

The skull of *Amphibia* resembles that of the Chimæroids and *Lepidosiren*, and differs from that of Teleostean, Ganoid, and Plagiostome fishes, in the absence of any natural division between the palato-quadrate and suspensorial cartilages.

(b) According to Stannius, however, the hyoidean arch is attached directly and independently to the skull in many Rays. See that author's admirable "Handbuch der Anatomie der Wirbelthiere," Erster Buch, p. 46.

Like the Carp and the Siluroids, the *Amphibia* are devoid of any interorbital septum, the cranial cavity remaining of tolerably even size from the occipital foramen to its anterior termination.

In the Frog (Fig. 39) the skull is roofed in by two long flat membrane bones (*Pa*, *Fr*), which correspond with the parietals and frontals, and, in fact, each originate in two distinct centres, one in front and one behind. In front of these are two other membrane bones (*Na*, *Na*), which have been variously interpreted, but which probably answer to the nasals. On the base of the skull is the long single parasphenoid (*x*), the hinder part of which is produced into two broad lateral processes which underlie the auditory capsules.

When these membrane bones have been stripped off, a subjacent cartilaginous cranium becomes apparent, produced behind into two lateral enlargements, or tuberosities, for the auditory organs, and having certain fontanelles or membranous spaces in its upper wall (Fig. 40). In the substance of this cartilaginous cranium, posteriorly, are two ossifications, one on each side of the occipital foramen, which nearly meet in the middle line above and below. These, the ex-occipitals, bear the condyles for articulation with the atlas, and partly shelter the posterior portion of the auditory organ. The front and upper wall of each auditory tuberosity is also largely ossified, the resulting bone protecting the anterior part of the organ of hearing, and being perforated, or notched, for the transmission of the third division of the trigeminal. This therefore is, without a question, the homologue of the pro-otic bone of the fish and of Man.

A fifth ossification of the cartilage is the very singular bone which Cuvier termed the *os en ceinture*, or "girdle bone," from its encircling the anterior part of the cranial cavity. This bone has somewhat the form of a dice box, with one end divided by a longitudinal partition. The latter—the front part of the bone—extends into the prefrontal processes in some frogs, protects the hinder ends of the olfactory sacs, and is perforated by the nasal division of the fifth. The median partition therefore must answer to some extent to the ethmoidal septum, while the lateral parts of the anterior division of the bone correspond with the prefrontals. On the other hand, the hinder division of the bone is an ossification of each wall of the cranium, in front of the exit of the optic nerves, so that I conceive this part of the bone can only answer to the orbito-sphenoids, united above and below. Upon this view of its nature, the girdle bone answers to at least five bones, viz., the ethmoid, prefrontals, and orbito-sphenoids.

FIG. 39.

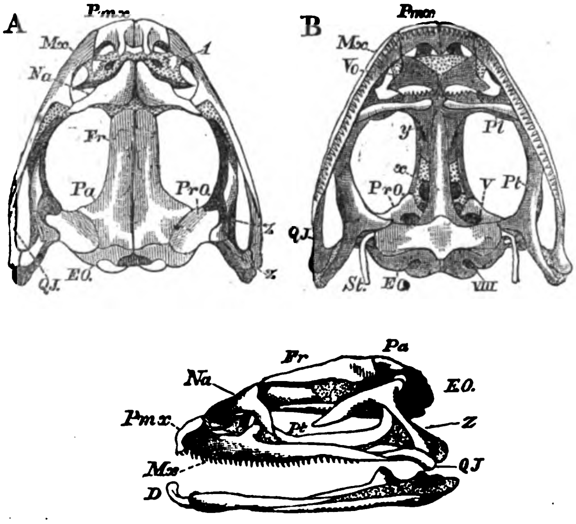


FIG. 39.—Skull of *Rana esculenta*. Seen A, from above; B, from below; C, from the side (after Dugès); *x*, the parasphenoid; *y*, the girdle bone; *z*, the "tempero-mastoid" of Dugès.

No alisphenoid is developed in any Amphibian. There is no separate opisthotic in the adult state, and I am not fully satisfied as to the existence of any distinct epiotic, though such a bone has been affirmed to exist (under the name of "mastoid") in the axolotl and the *Menobranchus*.

The anterior part of the ex-occipital, in front of the foramen for the eighth nerve, which perforates that bone, probably represents the opisthotic, as between it and the posterior external margin of the pro-otic is placed the *fenestra ovalis*, a structure not met with in the class *Pisces*.

The facial bones are, for the most part, readily determinable; thus there can be no doubt about the premaxillæ (*Pmx*), the maxillæ (*Mx*), and the two large toothed vomers (*Vo*). The position of the posterior nares between the last-named bones and the bones (*Pl*) taken in connexion with the relations of the latter to the prefrontal region of the skull, sufficiently defines the palatine character of (*Pl*), while (*Pt*), connected with the palatines on the one hand, and terminating on the inner side of the mandibular suspensorium on the other, correspond as distinctly with the pterygoids of the higher *Vertebrata*.

FIG. 40.

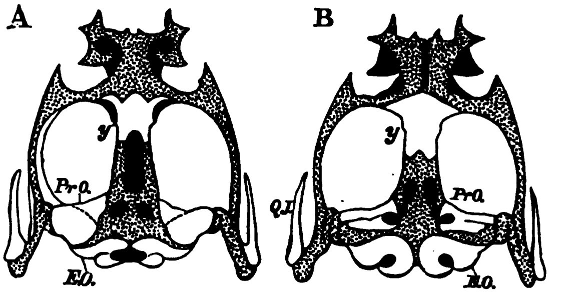


FIG. 40.—The Cartilaginous Cranium of *Rana esculenta*. A, from above; B, from below (after Dugès); *y*, the girdle bone.

The bone (*QJ*), which connects the end of the maxilla with the outer side of the suspensorium, appears to correspond with the quadrato-jugal of abranchiate *Vertebrata*.

It is more difficult to determine the nature of the bone (*z*), the "temporo-mastoid" of Dugès, which is a long, hammer-shaped, membrane bone, extending from the skull to the articular surface for the lower jaw, and sending a long process forwards over the temporal region.

When this bone, the pterygoids, palatine, quadrato-jugal, etc., have been removed, the cartilaginous cranium of the frog is seen to give off from the outer ends of the prefrontal region and the auditory protuberances, two prolongations, the anterior of which curves round the orbit, and eventually unites with the posterior in the cartilaginous process which articulates below with the mandible, and unites by its upper or cranial end with the suspensor of the hyoidean apparatus (*St*).

This arch clearly answers to the subocular arch of the Lampreys and to the subocular cartilage of the Chimæroids and *Lepidosiren*, and corresponds with the palato-quadrate, hyomandibular and symplectic cartilages of the embryonic osseous fish taken together. The distal end of this cartilaginous pedicle commonly presents a larger or smaller ossification of its substance, which represents the quadrate bone. Now, the problematical bone (*z*) lies on the outer side of the pedicle, and I was at one time inclined to think that it represented the hyomandibular bone of osseous fish—being largely led to that impression by the great size of the hyomandibular and the comparative minuteness of the quadrate in the Conger and the Murœnoid fishes. But the hyomandibular is an ossification in the cartilage of the suspensorium, not a membrane bone. The bone has been compared with the tympanic, but the tympanic membrane has a special and distinct supporting ring in the Frogs. It has been identified, again, with the squamosal, but it lies too far down on the outer side of the pedicle for that bone. Tracing the changes of form in this bone (which is very constant in the *Amphibia*) downwards to the *Menobranchus* and *Siren*, its resemblance in these perennibranchiates to the bone (*F*) of *Lepidosiren* becomes very striking; and I am disposed to identify it with that bone, which, as I have stated above, has much resemblance to the preoperculum of osseous fishes.

The mandible of *Amphibia* is commonly composed of three pieces—a dentary, an angular, and an articular. The latter, always continuous with Meckel's cartilage, may itself remain persistently cartilaginous.

The skull of the tadpole, before ossification has commenced, presents a cartilaginous base, in which the notochord terminates in a point, immediately behind the pituitary fossa. At the sides, the basal cartilage expands into two oval auditory capsules, and in front passes into the *trabeculæ cranii*, which embrace the membranous floor of the pituitary fossa, and reunite in the broad ethmovomerine cartilage. The apex of a subocular arch, connected behind with the auditory region of the basis cranii, and in front with the prefrontal region, furnishes an articular surface to the axial, or "Meckel's cartilage" of the mandible. In the young tadpole, a line drawn from the mandibular articulation to the auditory capsule makes an acute angle with the *basis cranii;* but, as age advances, the angle becomes more and more open, until, in the adult Frog, it becoms obtuse, the articular surface for the mandible having passed far behind the auditory capsule. Of course the width of the gape increases *pari passu* with this rotation of the mandibular suspensor.

A survey of the series of the *Amphibia* from the perennibranchiates upwards, shows, in a persistent form, those inclinations of the suspensor which are transitory in the Frog. Thus in the perennibranchiate *Siren*, *Siredon*, *Proteus*, and *Menobranchus* the angle is acute; in the Salamander and Salamandroid *Menopoma*, it is nearly a right angle; while, in the Frogs and Toads, and the ancient Labyrinthodonts, the angle is obtuse.

In the lower *Amphibia* there is no girdle bone, the orbitosphenoid and the prefrontals being usually represented by distinct bones. The frontals are distinct from the parietals, and the maxillary and pterygo-palatine arcades become imperfect.

Some of the Frogs and the *Cœciliæ*—the snake-like apodal amphibia—have the cranial bones expanded and anchylosed into a sort of shield, presenting apertures only for the orbits and the nostrils,—a process which is carried still further, by the addition of bones not known to existing *Amphibia*, in the extinct Salamandroid Labyrinthodonts.

CHEMICAL AIDS TO THE MEDICAL PRACTITIONER.

By ROBERT DUNDAS THOMSON, M.D., F.R.S.S. L. & E., etc.

No. III.

Necessity for Checking Chemical Experiments—A Single Experiment not Satisfactory—Preparation of a Standard Solution of Carbonate of Soda—Mode of Using the Volumetric or Graduated Test-tube—Estimation of Ammonia in Organic Analyses by Oxalic Acid—Calculation of the Amount of Nitrogenous Principles in Bread from the Ammonia—Determination of the Saline Matter of Bread—Relation of Insoluble to Soluble Salts in Bread and Blood—Analyses of the Salts of Bread.

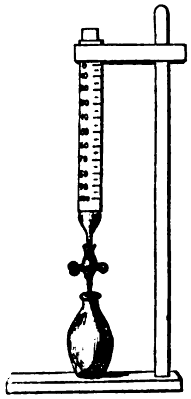
It is found essential in all accurate chemical experiments not to be satisfied with single trials, but to arrange our investigations so that we may be able to institute a check on every stage of the proceedings. Thus, it must not be taken for granted that our tests are pure because we have bought them under that guarantee; we must test them and check the statement. We have seen that we must prove the purity of the oxalic acid, by testing for its impurities before we can consider its solution in water a standard; but we must proceed still further, and determine how much alkali a given measure of it will neutralise, so that we may have standards corresponding both of acids and alkalies.

Preparation of a Standard Solution of Carbonate of Soda.—In making this solution it is necessary to take into consideration the impurities more or less present in carbonate of soda. I have found the crystallised carbonate of soda when ignited to consist of

Carbonate of soda	98·248
Sulphate of soda	1·100
Chloride of sodium	0·652

In weighing out an atom of the freshly ignited salt after cooling, allowance must be made for these impurities. Calculating from these data it would be necessary instead of 53 grains of ignited carbonate of soda, to dissolve in 1000 septems, or 1 lb. of water 53·945 grains, this product being obtained by the proportion 98·248 : 100 : : 53 : : 53·945, or as the amount of carbonate in 100 grains is to 100 grains, so is the atomic weight of carbonate of soda to the atomic weight charged with the impurities. To ascertain the amount of impurity, the most effectual plan is to dissolve a given weight of the carbonate, as 53 grains, in pure dilute nitric acid, and to add nitrate of silver until a precipitate of chloride of silver no longer falls. This precipitate is washed on a filter, dried at 212° and ignited on the lid of a platinum crucible, and weighed on cooling; 143·5 grains, being equivalent to 58·5 grains of chloride of sodium contained in the carbonate of soda. Another 53 grains of carbonate of soda are weighed out and dissolved in pure dilute nitric acid. The test solution is then precipitated by nitrate of baryta till nothing further falls. The sulphate of baryta is washed on a filter, dried, and ignited in a platinum crucible. Every 116·5 grains of the sulphate of baryta represent 71 grains of sulphate of soda in the sample of carbonate. Taking it for granted then that we find the two salts forming the impurities to be present in the quantities already detailed, we are in a condition to use a solution of the salt, prepared as directed, to check the accuracy of the standard solution of oxalic acid previously described. We fill a volûmeter (Fig. 1) with 100 septems of the carbonate of soda solution, and empty it by pressing the buttons of the wire stopcock into a flask placed beneath. The volûmeter being washed out with distilled water, is then filled with 100 septems of the standard solution of oxalic acid. In reading off the graduation of the volumeter it is very convenient to employ an Erdmann's *swimmer*. This is a hermetically sealed glass cylinder filled with air, and having a circle described round its circumference, which is adjusted so as to coincide when swimming in the fluid of the volûmeter with the zero of that tube. When a portion of the fluid has been allowed to escape, the height of the remaining fluid is read where the graduation of this volumeter and circle of the *swimmer* correspond. A solution of litmus is now added to the hot carbonate of soda solution, and the oxalic acid solution allowed to drop into it until the solution of carbonate begins to become slightly red. If the two solutions are accurately made 100 septems of the one solution will exactly saturate 100 septems of the other.

FIG. 1.



1000· septems water.
63· grains oxalic acid.
53· grains carbonate of soda.

By shifting the decimal point one figure to the left we see that 100 septems of the respective solutions will contain 6·3 grains oxalic acid, and 5·3 grains carbonate of soda, which will exactly neutralise each other. The stock carbonate of soda solution may now be prepared if the preceding experiments are successful. For a half gallon solution upon the previous data, 269·725 (53·945 × 5) grains of the carbonate of soda will be required, and for a gallon solution 539·45 grains, (53·945 × 10). This solution is to be preserved in a well-stoppered bottle. It is to be remembered that the preceding figures are only given as an example. They will vary in each sample of carbonate of soda. Before making the standard solution, therefore, the carbonate of soda, if it has not been previously examined, will require to be carefully analysed as previously described.

Estimation of Ammonia in Organic Analyses by Oxalic Acid.—These solutions being thus prepared so as to check each other, the solution of the oxalic acid may be employed accurately for the estimation of ammonia produced by the destructive distillation of bread mixed with soda-lime. Before commencing the combustion the two-bulbed tube is to have placed in it 30 septems of the standard solution of oxalic acid. After the analysis is completed in the manner described in the preceding paper, the oxalic acid solution partially neutralized with the ammonia from the conversion of the nitrogen of the bread into that alkali is washed out of the two-bulbed tube into a beaker. It is then heated and coloured red by the addition of blue litmus solution, and is placed beneath a volumeter containing 100 septems of the standard solution of carbonate of soda. The solution of carbonate of soda is allowed to drop into the red oxalic acid solution until it just becomes slightly blue. Care must be taken that by heating the liquor the whole of the carbonic acid disengaged from the carbonate of soda is expelled. We then read off the number of septems of carbonate of soda solution required to neutralise the free oxalic acid of the thirty septems of oxalic acid solution still unneutralised by the ammonia from the bread. Let us consider this to be as follows:—

Original septems of oxalic acid	30 =
Septems neutralised by carbonate of soda solution	11·7
Septems neutralised by ammonia	18·3

As 1000 septems of the oxalic acid solution are equivalent to 17 grains (the equivalent) of ammonia, or 14 grains (the equivalent) of nitrogen, we have 1000 : 14 : : 18·3 : ·256 = the amount of nitrogen in 10 grains of the bread analysed. This would, by changing the decimal point one place to the right, give 2·56 as the percentage of nitrogen contained in the bread. We have thus found the amount of the ultimate element nitrogen in 100 parts of the bread, and are prepared to calculate from it the amount of proximate principles represented by it. The mean percentage of nitrogen in the four proximate nitrogenous principles of flour is very nearly 16·, more precisely 15·96 (*School Chemistry*, p. 194). This number being contained 6·25 times in 100 parts, it is obvious that to obtain the amount of nitrogenous principles corresponding to 2·56 nitrogen we have only to multiply by 6·25. Hence, 2·56 + 6·25 = 16· per cent. of fibrin, albumen, casein, and glutin, contained in the sample of bread submitted to examination. When very great accuracy is demanded, especially in cases where the character of a tradesman is concerned, it will be found necessary to perform more than one analysis, and in this case it is desirable to vary the process of experiment. Instead, then, of condensing the ammonia by means of oxalic acid, pure chlorhydric acid may be employed, as already described (Paper II.). The amount of yellow platino-sal-ammoniac salt weighed on the filter would be 3·55 grains, and the reduced metal itself would amount to 1·8 grains. If these numbers were nearly as stated, the confirmation would be complete that the amount of nitrogen in the bread was 2·56 per cent., and that the nitrogenous principle was 16 per cent.

Determination of the Saline Matter of Bread.—The bread which has been deprived of its water of hydration, by exposure to a temperature of 340°, will be found to be brown in colour, presenting the aspect of a rusk. It is now to be exposed in a platinum capsule to the high temperature of a gas flame. A three or four branch Bunsen burner will be found to supply a sufficient amount of heat to burn the bread, which is to be fully exposed to the oxygen of the atmosphere. Its volume gradually diminishes, and after some hours the white ash will remain mixed with some portions of charcoal which it is difficult to entirely consume. To effect this object it may be exposed, while still red hot, to a stream of oxygen from the side exit-tube of a gas-holder filled with oxygen gas by means of a flexible tube; or the ash may be placed on a piece of platinum foil, which is introduced into a hard glass tube heated by a lamp below, while a stream of oxygen is allowed to pass over the ash from a gas-holder with which the glass tube is connected. For more than twenty years I have been in the habit of using nitrate of ammonia in order to oxidise the carbon of animal substances, and by this means many of the analyses elsewhere given ("*Experimental Researches on Food of Animals*;" "Chemical Researches on Cholera," *Medico-Chirurgical Transactions*, vol. xxxiii., 1850), were performed. The nitrate is to be cautiously added, by means of a platinum spatula, to the ignited ash in the platinum capsule, when the refractory charcoal will speedily disappear by renewing the application of the nitrate of ammonia. It is best in this experiment to collect the ash into a heap, and insert the nitrate in very small fragments, otherwise, in conjunction with the chlorides and other acids, the platinum may be acted on, which it always is, to a certain extent, in presence of phosphoric acid. It is found advantageous sometimes, in order to burn the charcoal, to triturate the ash with three times its weight of spongy platinum, and then to ignite the mixture, or to heat it in contact with a stream of oxygen gas as previously described, or in a current of atmospheric air. The oxygen is condensed in the pores of the platinum, and is in a condition to unite readily with the charcoal. When the amount of carbon to be oxidised is considerable, and the portion of substance analysed greater than we have supposed above, the operation of ignition may be performed in a capsule or on platinum foil deposited in a muffle, which is placed on a furnace, with a current of air passing over the surface of the organic matter.

When the carbon mixed with the ash is thoroughly oxidised, and the ash appears characterised by a white aspect,—as the ash containing carbonic acid united with lime and magnesia and earthy chlorides is liable to lose its carbonic acid and chlorine by a high temperature,—the ash should be sprinkled with a solution of carbonic acid in water, or with a weak solution of carbonate of ammonia, and again heated to low redness. The capsule with the ash is then placed under a bell jar over sulphuric acid until it has cooled and has ceased to lose weight. It is then carefully weighed. Some hot, distilled water is then to be introduced into the capsule, and heat applied so as to cause the liquid to boil. The whole is then thrown on a weighed filter (the weight being written in pencil on the filter), and washed until the filtrate gives no trace of chlorine, when it is tested with nitrate of silver. The soluble or alkaline salts of the bread are now contained in the filtrate, while the earthy phosphates, carbonates, and silica remain on the filter, together with any charcoal which may have escaped oxidation. The filter is dried at 340° in a hot air-bath, and, before being weighed, is deposited under a bell jar over sulphuric acid until it has cooled and has ceased to lose weight. Its weight is then accurately ascertained. It is then burned on the lid of a platinum crucible, or in a platinum or porcelain crucible, and weighed. If exposed to a strong gas heat, the last traces of charcoal will have disappeared. The charcoal will be obtained by taking the difference between the weight of the ash on the filter, and its weight in the crucible. To obtain therefore the true weight of the whole ash, the amount of charcoal thus obtained should be deducted from the first weighing of the ash. By subtracting, then, the insoluble salts, less the charcoal, from the total ash, there remains the weight of the soluble salts. By dividing the soluble or alkaline salts by the insoluble or earthy phosphate salts, we have the relation of the one class of salts to the other. In health we find that the relation of the insoluble phosphates to the soluble salts of the blood is very constant. Thus, during the occurrence of cholera, I found a healthy male's blood to contain 6·38 per 1000 of ash, and that of a healthy female 5·84 per 1000, while the relations of the insoluble to the soluble salts were as follows:—

	Total Salts per 1000 Blood.	Ratio of Insoluble to Soluble Salts.
Healthy Male .	6·38	1 insoluble to 4·02 soluble.
Healthy Female .	5·84	1 „ 4·40 „

In cholera blood the ratio varies greatly, and as soon as the disease is disappearing, and the patient is ushered into the last or febrile stage, the blood resumes its equilibrium. I found the ratio in this stage to be 1 insoluble to 4·3 soluble. My friend Dr. T. Richardson, of Newcastle, in his well-known analysis of blood, found the relation in healthy blood of the insoluble to the soluble salts as 1 to 4·18 (Thomson's "Records of General Science," iv., 126, 1836). These coincidences cannot be considered fortuitous. They appear to be steady laws, which analysis enables us to detect. The determination of the relation then existing in any kind of blood affords an auxiliary means of discriminating whether the fluid be in a healthy or abnormal condition.

Analysis of the Salts of Bread.—If adulterations are to be detected in the saline matter, it is necessary to determine the nature of each of the salts of bread. The method of analysis now to be detailed is applicable, with some modifications, to the determination of the constituents of the ash of most animal solids and fluids. The insoluble and soluble salts may be mixed together, or another portion of bread may be taken and calcined. But supposing we take the combined salts already used, they are placed in a porcelain basin, and treated with pure dilute nitric acid. The acid liquid is cautiously evaporated to dryness, again moistened with nitric acid, distilled water added, and the whole digested for some time at a moderate heat. The silica remaining is thrown on a filter and washed till the filtrate gives no precipitate with nitrate of silver. The chlorine in the filtrate is now precipitated by nitrate of silver, filtered, washed, and weighed. The excess of silver added to the filtrate is now thrown down by chlorhydric acid and filtered off. The filtrate may now be freed from some silica still remaining by evaporation to dryness in a porcelain basin, and treating the residue with dilute chlorhydric acid, and filtering off the silica, the weight of which is to be added to that previously obtained. The filtrate is now precipitated by caustic ammonia, which throws down the phosphates of lime and iron, and magnesia. This is washed free from soluble salts, but the washing must not be protracted too long, otherwise they may partially dissolve. These phosphates are then ignited with the filter in a platinum crucible, and their weight ascertained. (These are to be preserved, as if alum has been mixed with the bread the alumina will be contained in this precipitate. To the investigation of this product we shall subsequently return.) It is an interesting fact to observe that all the seeds of the cerealia used as food by man contain a minute quantity of iron. To those who profess to discover design in all adaptations to man, this will, no doubt, be quoted as an example of the destination of this iron for the production of the molecules of the blood, while others may use it as an illustration of the successful results of a long series of experiments made by mankind for ages. The cerealia as now used as food are not found in a wild state; they are the products of man's foresight and care.

To the filtrate from the phosphates, oxalic acid or oxalate of ammonia is to be added, when oxalate of lime will be precipitated. This is washed, dried, ignited, and weighed, when it will be obtained as carbonate of lime, oxalate of lime (CaO,CO_2CO) becoming carbonate of lime ($CaOCO_2$), and giving off carbonic oxide (CO) as a gas burning with a blue flame when ignited in a crucible. Fifty parts of this precipitate contain twenty-eight of lime.

Chloride of barium is now added to the filtrate from the oxalate of lime, when sulphate, phosphate, and oxalate of baryta will fall. These are to be filtered or washed by subsidence, and should be then treated with dilute chlorhydric acid. The phosphate and oxalate dissolve, while sulphate of baryta remains unchanged. The sulphate is collected on a filter, washed dried, ignited, and weighed. 116·5 parts contain 40 of sulphuric acid. The filtrate is precipitated with dilute sulphuric acid, when the excess of baryta falls, which is filtered. The filtrate is mixed with sulphate of magnesia. Caustic ammonia being added, the phosphoric acid is obtained in the form of ammonia-phosphate of magnesia, or triple phosphate, which, when washed and ignited ($2MgO,PO_5$) contains in 111 parts 71 of phosphoric acid. To the filtrate from the sulphate and phosphate and oxalate of baryta carbonate of ammonia is added in solution to precipitate the excess of chloride of barium. The precipitate of carbonate of baryta is filtered off and washed, and not preserved. The filtrate is evaporated and ignited in a platinum capsule. The residue consists of chlorides of potassium and sodium. The chloride of potassium is to be separated from the common salt by adding to their solution in a minimum of water an alcoholic solution of bichloride of platinum, evaporating to dryness in a small porcelain capsule and washing the residue on a weighed filter with a mixture of two parts alcohol and one ether, drying the potassio-bichloride of platinum at 212°, and carefully weighing. The composition of this salt is as follows:—

$$\text{Bichloride of platinum } PtCl_2 \left\{ \begin{array}{l} Pt\ \ 98{\cdot}7 \\ Cl_2\ \ 71{\cdot}0 = 169{\cdot}7. \end{array} \right.$$

$$\text{Chloride of potassium . . } \left\{ \begin{array}{l} K\ \ 39{\cdot}2 \\ Cl\ \ 35{\cdot}5 = \underline{\ 74{\cdot}7.} \end{array} \right.$$

$$244{\cdot}4.$$

By simple proportion we find the amount of potassium contained in the bread, from the quantity of yellow salt weighed; while, by calculating the amount of chloride of potassium and subtracting it from the original weight of the combined chlorides of potassium and sodium, the weight of sodium or soda present in the bread is estimated. But we may have a check upon this determination by igniting the potassio-bichloride of platinum in a strong red heat, when it is converted into spongy platinum and chloride of potassium. The salt may be washed out after weighing, and the potash estimated from the weight of the platinum; 98·7 grs. of platinum corresponding with 39·2 of potassium, or 47·2 of potash.

MUNIFICENCE.—A lady, whose name has not transpired, has given £500 to University College Hospital, and the same sum to the Middlesex Hospital. The Samaritan Free Hospital for Women and Children has also received £250 from an anonymous benefactor. Other charitable institutions have been benefited, probably from the same generous hand. The Duke of Marlborough has forwarded £105 to the Radcliffe Infirmary at Oxford, being the proceeds of fees from visitors to Blenheim Palace and Gardens.

ORIGINAL COMMUNICATIONS.

◆

CLINICAL MIDWIFERY.

By FRANCIS H. RAMSBOTHAM, M.D.

Physician-Accoucheur to the London Hospital, etc.

(Continued from page 245.)

Flooding after Delivery, attended by Violent After-pains.

Case 241.—On March 6, 1840, I was sent for to Mrs. L., a patient of my own in the Hackney-road, in labour of her eleventh child. The os uteri was very high and thick, and not dilated beyond the size of a shilling. Very little progress was made in the labour till noon on the 8th, when the membranes broke, and the child was born at 4 p.m. The placenta was expelled by the same pain which expelled the breech. There was a considerable loss of fluid blood when the placenta passed, and a coagulum as large as a fœtal head at birth came with it; in nine minutes another of the same size; and a third in ten minutes more. All this time there was a considerable loss of fluid blood as well, with violent after-pains, as strong as labour pains themselves, very frequent and very agonising. The uterus felt larger to the hand than it should have done, but very hard. The patient became faint, and neither pressure nor cold applications caused the least abatement of either the pains or the discharge. I therefore introduced my hand well into the uterine cavity, (which I had no small difficulty in doing, owing to the strongly contracted state of the os and cervix,) and removed a large, fibrinous, exceedingly tough coagulum, which was so closely adherent to the inner membrane, that I found great trouble in separating it. From that moment both the hæmorrhage and the pain ceased, the faintness speedily went off, and she made an excellent recovery.

Flooding after Delivery, attended by Violent After-pains.

Case 242.—On July 11, 1841, at 10·30 a.m., I was requested by a Professional friend to see a patient in Threadneedle-street, who had been delivered an hour of a first child, after an ordinary labour. The placenta came away naturally, but she flooded much after it had passed. She soon began to complain of intolerable after-pains, which were attended with a continued flow of blood. I found she had lost a considerable quantity, and was very faint. The uterus was extremely hard and large, never relaxing so as to become soft, but acting violently every four or five minutes, and each contraction was attended by excruciating agony. Cold and pressure had been liberally used before my arrival; I therefore, without delay, passed my hand into the uterine cavity, and took away a large teacupful of firm, fibrinous coagula. From that moment the pain entirely ceased, and the discharge was diminished to the natural quantity. She soon rallied from her faintness, and recovered without any check.

N.B.—Such cases as the two last would appear to be paradoxical, and to carry with them a contradiction; because one of our obstetric aphorisms is, that the more strongly the uterus contracts after labour, the less chance is there of hæmorrhage, and the greater safety is there for the patient. But this only applies to those cases where the organ is empty; if it contain a portion of the placenta, a firm, tough, fibrinous coagulum, the size of an apple, or a polypus, it may weary itself by its excess of action in futile efforts to get rid of the offending mass, and yet flooding will be going on all the while. Such cases are not generally alluded to in the systems of Midwifery published either in this country or on the Continent. I have thought it right to give them a prominent place in my "Obstetric Medicine and Surgery," and fourteen will be found detailed by me in the *Medical Times and Gazette*, vol. i. for the year 1853. Some Practitioners, indeed, have strained their imaginations to account for their production, and Gooch has referred them to an excited state of the circulation, and Burns to irregular uterine contraction. I cannot attribute them to such a cause, and I consider their explanation to be simple and easy. Some blood having been poured into the uterine cavity soon after the birth of the placenta, a great part of the serum escapes externally, and the crassamentum remains behind. This irritates the uterus to contract for the purpose of expelling it; but the contractions thus set up merely squeeze the mass tightly, and drain from it most of the fluid it contains; they do not expel the more solid portion. Thus a firm, dense, heavy, fibrinous clot is left, which clings to the uterine parietes with a tenacity so great that it is almost as difficult of separation by unaided uterine action as a piece of adherent placenta itself would be. Hence the necessity for manual removal; hence also the sudden cessation of the hæmorrhage, and of the intolerable pain which follows the emptying of the cavity.

Inverted Uterus.

Case 243.—On February 18, 1844, at 3·45 a.m., I was sent for by one of the Surgeons to the Royal Maternity Charity to Mrs. D., in Bishopsgate. She was in a state of great poverty, and her system was much depressed through want. She had been delivered by one of the midwives at 2 the same morning of her first child, after a tedious labour, owing to the uterus acting inefficiently, from the depressed state of the woman's powers. The midwife stated that the funis was twisted round the child's neck and arm, though not tightly; and that about ten minutes after its birth the woman began to strain very violently, much more so than before the child was born, and, indeed, more so than she had ever seen a woman do. The placenta came down under these strainings, but she could not get it away, owing to its being tightly adherent to some tumour. She therefore sent for the district Surgeon, who came immediately, and found her *in articulo mortis.* He removed the placenta, and sent to me. When I arrived she was quite insensible, just gasping. She had not lost nearly a pint of blood. The uterus was entirely inverted. I restored it to its proper position, but the woman died before I left the house, more apparently from collapse than from loss of blood.

N.B.—It is not impossible that the funis, having been shortened by being twisted round the child, may have been put so much on the stretch as somewhat to drag down the fundus uteri, to which the placenta adhered, and thus to produce a partial inversion, which the woman's straining so violently completed. This is the third case I have known where I have been assured by the attendant that no traction at the cord was made at all after the child's birth, so that this serious accident does not always arise from mal-practice.

Subjoined to case 108, p. 639, vol. i. for 1862, will be found an analysis of the cases of placenta presentation and forceps which I have detailed in these reports; subjoined to case 140, p. 250, vol. ii. for 1862, an analysis of the cases of craniotomy which I have given, and to case 187, p. 289, of this volume, an analysis of the cases of convulsions which came under my notice during these five years. There were eleven lingering breech cases; all the women recovered; eight children were born dead, of which four were putrid. Of the twenty-one transverse cases, one woman died from rupture of the uterus; exvisceration was performed in four cases, and decapitation in one, owing to the operation of turning the child being impracticable; and there was one case of spontaneous evolution. There were seven cases of face presentation, of which three were terminated by craniotomy, and two by forceps. Of the five lingering labours, one was from a dropsical ovum, one from prolapsed bladder, one from fright, arresting the labour-pains; there were three cases of ruptured uterus besides the one just mentioned; one of these women recovered. There were three cases of burst perineum, and one of extensive laceration of the labium. In six cases premature labour was induced, in five by the ergot, in the other case the ergot seemed to have no effect. Three cases of early abortion were attended by profuse hæmorrhage. There were two cases of uterine hydatids; all these patients did well. There was one case of secondary fœtus, and in twenty-four cases I was compelled to remove the placenta, or a portion of it which had been left behind. There were five cases of dangerous flooding after delivery: one complicated with a tumour embedded in the substance of the uterus, one with a polypus, one with relaxed uterus, two with violent after-pains, and there was one case of inversion of the uterus.

8, Portman-square.

Royal Recognition of Professional Services.—His Majesty the King of Saxony has been graciously pleased to create G. P. Dale, Esq., Surgeon, of Scarborough, a Knight of the Royal Order of Albertus, in consideration of the Professional services rendered to their Royal Highnesses the Prince and Princess George, and the Princess Sophia, of Saxony, during their recent sojourn at Scarborough.

ON RECENT IMPROVEMENTS IN THE METHODS OF CATARACT EXTRACTION.

By ROBERT B. CARTER, M.R.C.S.E.

Our German brethren have devoted much attention of late years to improved methods of cataract extraction, with a view to render the results of the operation more certain than they have been heretofore. From statistics embracing more than 3000 cases, it appears that, under the most careful hands, about one eye in twelve has been lost by the old method of flap extraction; and we should therefore be prepared to welcome any prospect of more assured success. The chief reformers in the matter have been Drs. Schuft (a), Mooren (b), and Jacobson (c), and it is to the methods of the two last-named that I desire to call attention. The method of Dr. Schuft was described some time ago in the *Ophthalmic Hospital Reports,* and has been often practised in this country. Some Surgeons speak more favourably of it than others, and in Germany it has occasioned lively controversy. I have myself employed it only twice, both times with destructive consequences. Dr. Mooren lost by it ten eyes out of thirty-two, and, on the whole, I do not think it has increased the average success of the operation.

Drs. Mooren and Jacobson have employed their respective methods, the former in sixty cases with only two failures, the latter in one hundred cases with only two failures. They both affirm that the starting-point of inflammatory mischief after extraction is to be found in the portion of iris that is compressed during the exit of the lens, that is to say, in the portion beneath the corneal flap. They both remove this portion by iridectomy; but Dr. Mooren makes the iridectomy a preliminary operation, and only extracts when the eye has completely recovered from it, while Dr. Jacobson makes the iridectomy the last step of the extraction. The explanation of the difference is simple. Dr. Mooren does not use chloroform; Dr. Jacobson places his patients deeply under its influence. Without it, iridectomy after the exit of the lens would be hazardous, but by its assistance the hazard is obviated. Dr. Jacobson departs also from the ordinary line of incision in the transparent cornea, makes his puncture and counter-puncture at the junction of cornea and sclerotic, and slightly approaches the plane of his knife to that of the iris, so that much of the cut is carried through the conjunctiva. In this way he gains room for the easy exit of the lens, and places his wound nearer to the vessels that supply materials for its repair.

Both Dr. Mooren and Dr. Jacobson operate by an inferior corneal flap, but assign no reasons for doing so. Dr. Mooren enters into no description of his actual manipulations, but Dr. Jacobson describes his minutely.

The patient being profoundly narcotized by chloroform, Dr. Jacobson seats himself in a convenient position on the side of the bed, and, while an assistant separates the eyelids, seizes the conjunctiva and the submucous tissue, with proper forceps, at a point below and to the nasal side of the cornea. With the disengaged hand he introduces his knife half a line below the horizontal meridian, makes his puncture and counter-puncture as described, and pushes the blade straight onwards as far as may be convenient. He then withdraws it, having an isthmus of undivided tissue at the centre of the flap; and whether this isthmus contain a portion of cornea, or only conjunctiva, will depend upon the proportion between the width of the blade and the corneal diameter. The capsule is then freely opened with Von Graefe's (fleam-shaped) cystitome, and the isthmus is next divided, its corneal portion (if any) with the point of the knife, its conjunctival portion with scissors, at about two lines from the rest of the wound. A very gentle pressure with the thumb, through the upper lid, turns the upper portion of the lens a little backwards, causes it to perform a sort of rotation in the eye, and to present its lower edge at the pupil, through which it passes in the usual way. The lower segment of the iris is next drawn out of the wound, and cut off close to its ciliary margin. The eye is then cleansed from blood and coagula, and, if the cornea be in good position, is closed immediately. If the cornea be sunken, Dr. Jacobson waits until it is elevated by freshly-secreted aqueous humour (that is, from five minutes to half-an-hour) before he applies the Arlt's compress, which, both by Dr. Mooren and himself, is considered an essential part of the treatment.

(a) "Die Auslöffelung des Staares." Berlin: 1860. Peters.

(b). "Die Verminderten Gefahren einer Hornhaut Vereiterung bei der Staar Extraction." 1862.

(c) "Ein neues und gefahrloses Operations Verfahren zur Heilung des Granen Staares. 1863.

During the whole of the operation, the effect of chloroform is maintained in such a degree as to render the ocular muscles absolutely passive; and the inhalation is therefore renewed from time to time as may be needed.

Dr. Jacobson devotes to the after treatment of his cases a degree of care and attention that must contribute very largely to his success. Each patient, for twenty-four hours after the operation, receives the undivided attention of a nurse. The earliest symptoms of inflammation are met by iced poultices, changed every few minutes, and by continuous leeching where the symptoms are severe, and the patient's strength will permit. Four leeches are applied in front of the ear, and replaced by others as they fall, until no less than from forty to eighty have been used in a single case. Dr. Mooren's method does not seem to entail much liability to inflammation, and he speaks as if little or no treatment had been required by his patients.

Upon reviewing the respective merits of the two forms of operation, I think it is manifest that the proceeding of Dr. Jacobson is best adapted for Hospitals, and that of Dr. Mooren for private practice. In the former, it is usually an object to save time, and to discharge the patient as soon as possible, while the advantages of skilled nursing and constant Medical superintendence are available. In the latter, time is of less importance, and it will usually be desirable to diminish the risk of inflammation, by dividing the whole manipulation required into two distinct operations.

Dr. Jacobson deserves the thanks of the public for having placed upon so wide a basis of experience the fact that chloroform may be used in cataract extraction with perfect safety, and that the various hypothetical objections to its employment have no foundation in the occurrences of practice.

Against the greater safety afforded by iridectomy in cataract extraction, two objections have been raised, namely, the unsightliness of the coloboma, and the dazzling produced by the enlargement of the pupil.

Of these objections, the first might fairly be made a question for the patient, "Will you have one risk in twelve with a round pupil, or one in fifty with an oblong?"

The second is scarcely found to exist in practice. When present it may be obviated by a tinted spectacle lens, which should be made by cementing a plane blue glass between two plano-convex of the needful power. Or it may be prevented by making a superior iridectomy and flap, in which position the deformity also is much concealed.

In cases where the cortical portion of the opaque lens is soft and swollen, and where much soft matter is likely to be left in the eye, the inferior coloboma iridis is decidedly advantageous. It allows cortical matter to gravitate freely into the anterior chamber, and to rest against the cornea, where it is absorbed without producing irritation. Under all other circumstances I should prefer the superior flap.

I have myself combined iridectomy with extraction in the following cases, some of which well illustrate the advantages of doing so:—

1. W. M., age 34, labourer. Right eye destroyed by injury many years ago. Sight of left has been gradually failing. Lens opaque. Qualitative perception of light. A superior corneal flap being made under chloroform, the mingled vitreous and aqueous humours, equally fluid, escaped until the globe was nearly empty. The lens could not be removed; I cut out a piece of iris, and closed the lids. The wound healed perfectly, the globe refilled, and, except for the altered pupil, the eye recovered the same appearance and the same perception of light as before the operation.

2. W. B., aged 65, gardener. Senile cataract of both eyes. Right eye, extraction by superior flap, without iridectomy. Left, iridectomy, superior, and extraction three weeks later. Reads No. 2 Snellen equally well with either eye.

3 and 4. J. B., a feeble, infirm woman, aged 72. Blind two years of left eye, two months of right. Right eye, large lens, externally softened, whitish. Left eye, lens amber-coloured, and hard. Double iridectomy under chloroform, double extraction under chloroform three weeks later. Inferior operations on the right eye, superior on the left. Perfect healing, and good sight with both.

5. J. C., aged 70, widow, feeble. Hard cataract in left eye only. Iridectomy without chloroform. Three weeks later, extraction without chloroform by superior flap. Violent spasm of the ocular muscles, by which the lens and a very large quantity of firm vitreous were expelled on completion of the section. Corneal flap folded down by upper lid. After a short period flap replaced, and lids closed. Good healing. After an imprudent exposure to light on the sixth day, iritis. Atropine and cold poultices; and recovery with closed pupil. Artificial pupil made a month later, through which the patient now reads No. 6 of Jaëger.

6. M. B., aged 68, widow. Hard cataracts in both eyes. Double superior iridectomy under chloroform, extraction from right eye only, without chloroform, a fortnight later. Reads No. 1 Snellen.

The above cases, all of which, except the first, have been operated upon this year, have shown me that the preliminary iridectomy greatly facilitates the exit of the lens; and, in the fifth case, the eye recovered after a series of misadventures, which would have been certainly fatal to it if the iris had been entire. The great loss of vitreous humour would have produced prolapsus iridis, delayed healing, chronic inflammation, and probable phthisis bulbi.

A comparison of No. 2 with the right eye of the same patient shows that a superior coloboma iridis affords as good vision as a round pupil; and a comparison between Nos. 3 and 4 shows that an inferior coloboma does not exert a more prejudicial influence. Something would of course depend on the different sensitiveness of different retinæ, but I apprehend that a tinted glass would always reduce the question to one of appearance.

It is necessary to mention that if the lens does not move readily by very gentle pressure, Dr. Jacobson excises a portion of iris to facilitate the extraction. The only objection to iridectomy at this stage of the operation is the consequent bleeding, which conceals the lens from the Surgeon.

In conclusion, I would observe that Dr. Jacobson's cases were taken at random, but that Dr. Mooren's were all selected as highly unfavourable for the ordinary operation. His sixty patients were all either very aged and feeble, or very plethoric, or suffering from cough, or from disease of the vitreous body or choroid, in addition to lenticular opacity. One of his two failures appears to have been due to an accident; so that, on the whole, his statistics may be considered equal to those of Dr. Jacobson. I learn from my friends Mr. J. Zachariah Laurence, and Dr. Taylor, of Nottingham, that they have each of them employed Mooren's method with advantage.

Stroud, Gloucestershire.

[After the above was revised for the press, I saw the paper by Mr. Workman, on Schuft's operation, in the *Medical Times and Gazette* for the 3rd inst. The proceeding having thus been brought prominently before the Profession, I am anxious to observe concerning it that the pressure of the spring speculum and the frequent introduction of the scoop are two sources of danger to the eye from which the methods of Mooren and Jacobson are free. In my two cases above referred to, suppuration of the globe followed the operation; although, in one of the patients, I performed ordinary flap extraction successfully upon the remaining eye. But I think the results obtained at Moorfields are not to be looked for in general practice, and that they depend upon a combination of exceptional conditions—foremost among which would be the great dexterity of the operators.]

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—St. Luke's Day having this year fallen on Sunday, the annual meeting of the above College was held on Monday, the 19th inst., when Dr. Corrigan was again elected President, the unanimous wish of the Fellows being that the splendid new College-hall, now nearly completed, should be inaugurated by him to whose exertions the undertaking is mainly indebted for its successful issue. The following officers were at the same time appointed:—*Vice-President*—Aquilla Smith, M.D. *Censors*—Aquilla Smith, M.D.; Henry Freke, M.D.; Robert Mayne, M.D.; Edward B. Sinclair, M.D. *Treasurer*—Henry Law Dwyer, M.D. *Registrar*—Lombe Atthill, M.D. *Librarian*—George Alexander Kennedy, M.D. *Professor of Midwifery*—Fleetwood Churchill, M.D. *Professor of Medical Jurisprudence*—Thomas Brady, M.D. *Examiners in Midwifery*—George Johnson, M.D.; Benjamin G. Guinness. *Representative on the General Medical Council*—Aquilla Smith, M.D.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

GUY'S HOSPITAL.

ON CORNEAL INCISIONS MADE WITH SCISSORS, AND THEIR APPLICATION TO EXTRACTION OF CATARACT.

(By C. BADER, Ophthalmic Assistant-Surgeon to the Hospital.)

It occasionally happens even to the best operators for cataract that, on account of a sudden movement of the patient's eye or head, or of some other untoward accident, while passing the cataract knife across the anterior chamber, the corneal section cannot be completed, and the cataract knife has to be withdrawn, and the section to be finished in some other way.

The object of making the corneal incision with scissors was therefore,—(1) to ascertain whether a better control could be obtained over the movements of the eye during the operation; (2) whether corneal incisions thus made would heal well; (3) whether this mode of operating is applicable to cataracts complicated with morbid changes of the vitreous, etc. Details of a few cases are given, in which the complications existing with cataract might have influenced the healing of the section.

Mode of Operating.—The position of the patient, of the assistant, and of the operator are the same as in ordinary extraction. The eyelids are kept open by a spring speculum. An opening is made into the cornea either with a broad needle or with a cataract knife at the spot which would be selected for ordinary extraction. The opening should be large enough to give easy access to one blade of a blunt-pointed pair of iris or strabismus scissors. The aqueous humour is allowed to escape slowly. Then one blade of the scissors is passed through the small corneal incision into the anterior chamber, taking care to glide its point along the posterior surface of the cornea, and carrying on the incision with the scissors. The incision is most easily made outwards, and downwards, and in the transparent margin of the cornea. Three or four successive small incisions will suffice to make the corneal wound equal in size to one made in the ordinary method of extraction, though it is quite in the power of the operator to make the incision as long or short as he pleases. The blades of the scissors while making the successive small incisions should not be closed completely, but only up to the blunt point, the latter resting upon the inner surface of the cornea, so that a good control is obtained over the movements of the eye, while the scissor-blade need not be introduced repeatedly into the anterior chamber. The left eye is operated upon with the left hand; the right with the right.

Instruments required.—1. A spring speculum. This speculum keeps the eyelids open without pressing upon the eyeball, *i.e.*, without stretching the conjunctiva so as to impede the movements of the eye; it is made of thin silver wire, to avoid its weight inconveniencing the eye, and it can, by a peculiar contrivance, be opened to a desired extent, and is found very useful wherever—as, for instance, in glaucoma—any undue pressure upon the eye during operation might prove injurious. 2. Forceps for fixing the eyeball, as suggested by Mr. France. 3. A pair of bent, blunt-pointed iris scissors. 4. A curette and scoop.

Number of Cases.—Twenty-one eyes were operated upon in this way; 9 times the left, 3 times both, and 6 times the right eye. In several cases ordinary extraction was performed on the fellow eye. 4 times an upper, 6 times a lower, and in the remainder of cases an outer and lower corneal incision was made.

Ages of the Patients.—Four between 20 and 50; 11 between 50 and 70; and 3 between 70 and 90.

Vision was improved in all cases, 18 of the 21 eyes being able to read small type. Vision was tested with the spectacles which were supplied to the patients. One patient (a short, stout woman) was attacked by gangrene of one leg on the fifth day after the operation, but the section of the cornea healed well, and normal vision was obtained.

Case 1.—Enlarged Eyeballs—Cataract—Double Extraction.

E. N., aged 45 (admitted in January, 1863), of hazel, delicate complexion; passes much urine, with a small quantity of sugar. Both eyes are unusually large (enlarged in all diameters); the veins of the ciliary region are gorged; both crystalline lenses are uniformly grey, opaque, and large. An upper corneal section was made in the left eye with a cataract knife, in the right eye with scissors. Slight prolapse of the iris followed in the left eye; the right corneal incision healed well, and the line of section is hardly visible. In February this patient was supplied with spectacles for both eyes.

Case 2.—Fluid Occupying the Vitreous Space—Dislocation of a Chalky Lens into the Anterior Chamber—Extraction.

G. D., aged 30, admitted in November, 1862. He had received a blow on the right eyebrow twenty-three years ago, and twenty-two years ago he accidentally noticed that he could not perceive light with the right eye, and twelve years ago a white substance was noticed in the pupil of this eye. This substance disappeared spontaneously a month ago. Ophthalmia with pain soon followed, and a week ago the white substance reappeared in the pupil, but pain and ophthalmia (ciliary redness) continued. A large white, opaque, and chalky lens was seen in the anterior chamber. It was movable, its most convex surface rested upon the anterior surface of the iris. It was extracted by a lower corneal section made with scissors. Transparent fluid escaped from the vitreous space; the coats of the eye completely collapsed; half an hour later they had resumed their natural curve. The corneal incision had united on the third day. Redness and pain subsided after the third week.

Case 3.—Congenital Syphilitic Changes— Cataract (probably congenital)—Double Extraction.

H. S., aged 28 (admitted September, 1862), a perfect specimen of the congenital syphilitic type, hydrocephalic fits in infancy, cicatrices from disease of bones of the face during infancy, the characteristic (Hutchinsonian) changes of the permanent incisor teeth, etc. Vision had been impaired since birth, but became weaker since the age of 15.

With the ophthalmoscope, a diffused red reflection was obtained from the fundus, the state of the crystal lenses preventing a view of the details of the fundus. In both lenses were (with reflected light) noticed white and opaque striæ, which, from near the posterior pole of the lens, radiated towards its margin. The lens substance between, and on a level with these striæ, was uniformly grey and opaque. The remainder of the lenses was transparent, with exception of a few grey and opaque radiating striæ near the anterior pole. In the right eye an upper corneal section was made with the cataract knife, over the left a lower one with scissors; both healed equally well. With spectacles the patient could read No. 12 of Jaëger, and could recognise distant persons. At the age of 28 one would have expected the crystal lenses to be soft, instead of which in this case they were large, flat, hard throughout, yellowish, and transparent, except at the striated portions, which were soft.

Case 4.—Fluid in the Vitreous Space—Tremulous Crystalline Lens—Extraction—(Scissors).

E. C., aged 72, admitted July, 1862. The vision of the left eye was impaired by a blow on the eye forty years ago; vision of the right eye began to fail twelve years ago. Iridectomy with extraction of cataract was performed on the left eye in the usual way. In the right eye tension good, entire retina sensitive, anterior chamber large, iris tremulous, crystalline lens brownish grey, and opaque, and tremulous. The corneal section and the iridectomy were made with scissors outwards and downwards, a scoop was rapidly passed behind the crystalline lens, which began to sink back into the vitreous space as the contents of the latter, consisting of transparent fluid, escaped, and was (in its capsule) extracted. During the operation the tunics of the eye completely collapsed, but within twelve hours they had resumed their normal curve, the fluid for the vitreous space having been resecreted; the section healed well. In November, 1862, the patient was supplied with spectacles for both eyes.

Case 5.—Hæmorrhage with Disorganisation of the Vitreous—Cataract—Extraction (Scissors.)

J. L., aged 47, admitted August, 1862, had both eyes repeatedly injured by blows with the fist, etc. Vision was much impaired in the right eye since four years, in the left eye since three weeks. In the left eye there was a displacement of the upper and lateral parts of the retina; in the right eye, posterior synechiæ and an equally grey and opaque lens were noticed. Vision had been impaired suddenly at the time of the injury, the impairment remaining stationary; perception of light existed over the entire retina; it was equally depressed throughout. It was evident from this that the opaque lens was not the sole cause of the impairment of vision, but it was thought probable that its removal might contribute towards improvement of sight. An upper corneal section was made with scissors, and the opaque lens removed. On the fifth day the section had healed, leaving a clear central pupil, through which, by the ophthalmoscope, numerous grey and opaque shreds could be seen floating about, and gravitating in the vitreous space.

SUSSEX COUNTY HOSPITAL.

AXILLARY ANEURISM—LIGATURE OF SUBCLAVIAN ARTERY—RECOVERY.

(Under the care of Mr. FURNER.)

(Reported by Mr. Rogers.)

John P., aged 27, a robust, healthy-looking man, about the middle height, and with strong, muscular development, was admitted into the Sussex County Hospital under the care of Mr. Furner, June 9, 1863.

History.—A married man, living in Brighton, temperate in his habits. For the last three years he has been employed at the Brighton Railway Station as "lifter." By this term is meant that it is his duty to be constantly lifting the heavy carriage and other wheels used on the railway. He remembered, ten weeks ago, whilst engaged in this manner, *i.e.*, moving a large iron wheel, "that he felt something give way with a snap on his left shoulder;" after a few minutes he resumed his work, but a week or two after this occurrence he noticed a swelling in the place where he considered he had "strained" himself. He continued, however, to perform his accustomed duties until the day previous to admission, when he consulted Dr. Carter, of this town, who, at once recognising the nature of the case, sent him to Mr. Furner.

On examination, there was a pulsating tumour beneath, and somewhat to the outer side of the left clavicle; it was about three by two and a-half inches in diameter, uniform on its surface, globular in form, and pulsating contemporaneously with the pulse at the wrist. There was no bruit. Pressure upon the subclavian artery completely arrested the pulsation. He had no pain down the arm, nor was there any œdema. Pulse was about 78, soft, and perhaps a trifle weaker on the left side. His bodily health was perfect. He was ordered to lie in bed, to have cold lotion constantly applied to the swelling, an occasional aperient when required, and a moderate diet.

17th.—The swelling was certainly smaller; a slight bruit could now be heard.

18th.—Mr. Furner tied the subclavian artery in the third part of its course. An incision about four inches long was made a little above, and parallel to, the clavicle; the platysma myoides was afterwards divided to the same extent. Two superficial veins required tying, and the clavicular portion of the sterno-cleido-mastoid muscle was next divided upon a director, when the external jugular vein came fully into view: this was tied in two places, cut across, and the two ends held aside. A silver knife was now used to scratch through the deep fascia until the scalenus anticus and omo-hyoideus muscles were seen. The latter muscle was hooked aside, and, after a little more careful dissection, the brachial plexus of nerves was exposed, and, crossing it, a large artery. A ligature was passed around this, which, indeed, was at first supposed to be the subclavian itself. On tightening the ligature, however, it was found that the pulsation in the tumour continued unaltered, and, on separating the parts a little more, another artery could be seen beating. A strong whipcord ligature was passed round this latter from below upwards, and tied, when the circulation in the aneurism was instantly arrested. The artery first tied seemed to arise from the subclavian, and Mr. Furner considered it to be the "transversalis colli," having an abnormal origin, instead of arising from the thyroid axis as it usually does. The wound was closed by three sutures, strips of plaster applied, the whole arm enveloped in cotton wool, and the man put back into bed with the arm slightly raised by pillows. The pulse was then about 72, very soft. (The operation lasted fifty-five minutes, and chloroform was not administered for the following reasons:—(1) To avoid venous congestion about the neck; (2) the vomiting which it so often produces would have militated very much against the after success of the case; (3) the length of time under which the man would necessarily have to be under its influence might interfere with coagulation in the formation of the clot.) At 10 p.m. he was very comfortable, only complaining of a feeling of numbness down the arm. The temperature of both arms alike.

19th.—Passed a comfortable night; expression tranquil; very little pain in the arm; temperature the same on both sides; pulse, 88. Milk diet.

20th.—Doing well; clean strapping applied. Beef-tea, one pint.

21st.—Sutures removed; wound looking quiet, and healed in places by first intention.

23rd.—Bowels have not acted for a week. To have an injection. Mutton-chop and two eggs.

25th.—Nothing to notice. Porter, half-a-pint.

29th.—He was rather feverish, and the bowels much confined. ℞ Hydrarg. chlor., gr. ij.; pulv. Jacobi ver., gr. ij.; pil. coloc. co. gr. v.; M. ft. pil., ij.; horâ somni sum. To return to a lighter diet, consisting of milk, beef-tea, and soda-water.

30th.—Much relieved by a copious action of the bowels; wound discharging healthily.

July 2 (fourteenth day).—The ligatures from both arteries came away in the dressings. To return to the meat diet, with porter, as before.

6th.—The ligatures from the jugular vein came away; wound nearly healed.

15th.—The arm being secured to the side by a flannel bandage, he got up for the first time.

August 6.—He seemed quite well, and went out of doors, a sling being substituted for the bandage.

26th.—Discharged in the following condition:—The wound quite healed; there was a small, round, hard swelling beneath the left clavicle about the size of a small chestnut; no pulsation could be detected in the radial artery; he had perfect use of the arm, and there was no œdema of it. He expressed himself as feeling as well as he ever did in his life, and his general appearance certainly indicated this.

LIVERPOOL SOUTHERN HOSPITAL.

POPLITEAL ANEURISM—TREATMENT BY PRESSURE AND FLEXION—LIGATURE OF THE FEMORAL ARTERY—RECOVERY.

(Under the care of Dr. NOTTINGHAM.)

J. H., aged 46, a man of robust and healthy appearance, presented himself in the out-patient room on the 28th July, complaining of a swelling in the popliteal space. On examination it was found to be an aneurism, about the size of a small hen's egg. He was at once admitted under the care of Dr. Nottingham. He stated that three weeks ago he awoke suddenly in the night suffering intense pain in the muscles of the calf of his left leg. Considering that it was an attack of cramp, to which he was at times subject, he violently extended the leg three or four times; by this means the pain disappeared, and he retired again to bed. On awakening the following morning, feeling some uneasiness in the ham, he was induced to place his hand on the part, and discovered a pulsating tumour the size of a small walnut, of which, however, he took little notice, although he must have known its nature, as he is the son of a Surgeon, and himself studied the Profession for a short time. He was able to follow his occupation (that of a ship's chronometer maker) up to the time of admission; he suffered little or no pain, and there was no tumefaction or numbness of the leg, but that limb, he says, always felt heavier than the other.

The treatment consisted in flexion of the leg on the thigh, one bag of ice being placed on the tumour, and another down the course of the femoral artery. This was continued until the 30th of the month, no benefit resulting therefrom. Pressure on the artery above the tumour by means of two tourniquets, was tried with a like result from July 30 to August 6, when, on account of the pain and swelling it produced, it had to be discontinued. It was now resolved to ligature the femoral, which was accordingly done in the usual manner and in the usual position. Everything progressed favourably; the ligature became detached on the twelfth day, and the patient was discharged cured in the early part of September.

I believe, remarks the reporter of the case, Dr. Gulston Wollaston, that it is a well-known fact that the Irish, who drink largely of whisky, are particularly subject to aneurism. This man was an Irishman, and for a great number of years had drunk whisky to excess.

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Medical Times and Gazette.

SATURDAY, OCTOBER 24.

◆

THE NATURAL LAWS OF HUSBANDRY.(a)

Medicine is not the only one among the applied sciences where there exists a large and substantial basis of recognised trustworthy theory, but, at the same time, a mass of observation and experience stored up in the progress of ages, independent of any legitimate scientific groundwork, and indeed often antecedent to its discovery. Upon a state of things like this has been established the best definition of art and science we possess; for experience and practice gathered into technical precepts characterise the former, and only rise into the latter when the relation is made clear between the observed facts and great natural laws which underlie them.

It is not without interest to the thoughtful student of our craft to watch the phases of such an antagonism in the art or science of agriculture. He may there see, like the eye-witness of Lucretius, unmoved, and even with a feeling of pleasure, the same struggles going on, the same confusion of fact and opinion, the same display of hostility and sectarianism which are labouring for mastery among his own fellows, while the comparative remoteness of the contest from his daily life will keep him clear of the turmoil, and free his judgment from prejudice or partisanship.

Assuredly there is no one man among living chemists to whom the husbandman is so much indebted as to Justus von Liebig. Many years have now elapsed since he first enunciated theories both of vegetable and animal chemistry, which he reiterates and completes in his recent work. Indeed, there is something touching, though not without a shade of humour, in the passage where he himself calls to memory the lapse of time. Philosopher like, he submits his own frame to the same analysis as he has long been wont to adopt towards other organisms. He sees with a chemist's eye the signs of maturity verging on decay stealing over him, and in the autumn of life puts forth in ripened form the intellectual fruits which have been so long growing.

"As for myself," he says, "I have reached the age when the elements of the mortal body betray a certain tendency to commence a new circle of action, when we begin to think about putting our house in order, and must defer to no later period what we have to say. As every investigation in agriculture requires a year before we have all the facts before us, I have scarcely any prospect of living to see the results of my teaching. The only thing that remains for me to do under these circumstances is to place my views in such a manner before the public that there can be no possibility of misconception on the part of those who will give themselves the trouble of becoming thoroughly acquainted with them."

It is not our object on the present occasion to make a minute examination into the truth or correctness of the views which Baron Liebig holds; we need only contemplate the question as outsiders, and with that interest which necessarily appertains to kindred scientific speculations. Our opinion of their author will probably be based more on his purely physiological researches, and we should show no less ingratitude than would the farmers by undervaluing the great and substantial contributions which he has furnished to Medical chemistry. It has been with Liebig, as is often the case with master minds of any epoch: his image has, to some extent, impressed itself on contemporary thought. Even if, in the course of advancing information, minor points may have received newer interpretations, and observations erroneous or incomplete may have undergone revision, the general outline and main features of his philosophy have stood firmer than most similar productions; and numbers of inquirers, taking the impulse of discovery, as it were, on the rebound, have been guided to trains of research which have issued in important improvements. In a somewhat similar way the art of music has, at different periods, acknowledged the influence of genius strong enough not only to create for itself, but also to guide minor inspirations on to an unconscious, but reflected similarity. It has been noticed that the rhythm and spirit of a Mendelssohn has passed into all the melodies of his era, echoed back unwittingly, perhaps unwillingly, as when, in the old fable, the head of Orpheus was rolling with the stream of Hebrus.

> Eurydicen, vox ipsa et frigida lingua,
> Ah miseram Eurydicen ! animâ fugiente vocabat,
> Eurydicen toto referebant flumine ripæ.

In the very first sentence of the important work whose title heads our present remarks, we are introduced to the controversy in question. The author reckons among the chief obstacles to the introduction of scientific teaching into the domain of practical agriculture the complete separation which has always existed between science and practice, and the idea that a smaller amount of information and intelligence is required for agricultural pursuits than for any other occupation.

"Whatever requires thought and reflection is regarded as theory, which, being the opposite of practice, must of course be of little value. The natural result of such opinions is, that when the practical man does attempt to apply scientific teaching, he is almost invariably a sufferer. He seems altogether to forget that man does not become intuitively acquainted with scientific teaching, which, like the skilful use of any complex instrument, must be learned."

There can be no hesitation in admitting the truth of these views, although they are equivalent to a damaging admission that scientific husbandry cannot in every case hope to become remunerative; and, indeed, such is the burden of the cry often raised against it by men who have to live from the produce of their land, and who cannot afford to bury in the earth expensive manures and chemical products, often commercially valuable, on the uncertain issue of reaping them in increased crops. In this respect our highest thanks must be due to gentlemen farmers and experimentalists like Mr. Mechi, who do not fear, at a pecuniary risk, to test the practical soundness of what philosophy suggests.

But the author, in his slightly combative preface, goes a step farther than this. He says:—

"Under the dominion of tradition and slavish submission to authority, the practical man has lost the faculty of forming a right conception of the facts which daily pass before his eyes, and in the end can no longer distinguish facts from opinions. Hence, when science rejects his explanations of any particular facts, it is asserted that the facts themselves are denied. Long disputes have arisen about misconceptions of this kind. The practical man does not understand the inferences of science, and considers himself bound to defend his own views. The contest is not about scientific principles, which he does not understand, but about the false conceptions he has formed of them."

(a) "The Natural Laws of Husbandry." By Justus von Liebig. Edited by John Blyth, M.D., Professor of Chemistry in Owens College, Cork. London: Walton and Maberly. 1863. 8vo. Pp. 416.

It is not difficult to trace in the tone here adopted some pardonable irritation at the difficulty which has been experienced by so original a thinker in obtaining a due hearing for his discoveries from the class most interested in them. And it is not without interest as a matter of coincidence to hear a repetition from the mouth of a scientific reformer of the very complaints which were hurled at the farmers' obstinacy by finânciers and political economists at the time when the Corn Laws and Free Trade were under discussion. It is to be hoped that here, as there, truth will ultimately prevail, and that the judicial blindness which Liebig attributes to the agriculturalist will be in the end dispelled by the light of science.

Dr. Blyth, the editor, and we presume translator of the present work, whom we must compliment on a satisfactory performance of his functions, in a preliminary notice sums up the main points of theory which Liebig has inculcated:—

> "The fundamental basis," he says, "of the work is the so-called mineral theory, which holds that the food of plants is of inorganic nature, and that every one of the elements of food must be present in a soil for the proper growth of a plant. The discovery of the remarkable power of absorption possessed by arable soils has necessarily led to a modification of the views regarding the mode in which plants take up their food from the soil. Hence the great importance of studying the ramifications of the roots of plants, and the mode of growth of different classes of plants cultivated by man."

To this last subject the first part of the work is devoted, and the second to means of mixing the exhausted and unexhausted portions of the soil. Other chapters show how due absorption of nutritive substances is effected by mechanical operations, by organic matter, by manures, and by certain chemical salts. The question of the altered composition of the ground by cultivation is discussed at length, as well as the means of making the abundant nitrogen available and energetic. Farm-yard manure is considered minutely, and though its high value is admitted, it is shown that the hope must be fallacious "of keeping up permanently the fertility of the soil by manure obtained by the system of rotation, whilst we continue still to sell the corn raised by such manure, without bringing back to the soil any portion of the mineral matter sold with the corn and cattle."

It is further shown that the excrements of man contain all the mineral matter, not only of the corn, but also of the cattle sold from the land. If we could restore these excrements to the soil, a perfect circulation of the conditions of life for plants and animals would be established, and our fields would be retained in a state of permanent fertility. An appendix as to Japanese husbandry shows how this object is attained in that country.

> "The Japanese does not construct his privy as we do, in some remote corner of the yard, but he makes it an essential part of the interior of his dwelling. To receive the excrements there is placed below the square hole a bucket or tub of a size corresponding to it, with projecting ears, through which a pole can be passed to carry the vessel. As soon as it is full it is taken out and emptied into one of the larger dung-vessels. These are placed either in the yard or in the field; they are large casks, or enormous stoneware jars, in capacity of from eight to twelve cubic feet, let in the ground nearly to the brim. In these vessels the manure is prepared for the field. The excrements are diluted with water, no other addition of any kind being made to them, and stirred until the entire mass is worked into a most intimately mixed fine pap. The solid ingredients of the pap gradually subside, *and fermentation sets in;* under no circumstances is the manure ever employed in the fresh state."

To ordinary readers this passage requires no farther comment than an allusion to the old proverb which narrates the results, "the more you stir it," etc.; but to sanitarians and to persons interested in schemes for employing the sewage of London it has a peculiar interest. One of the gentlemen who sent in tenders to the Board of Works, by proposing to reorganise our whole defæcatory apparatus, really approaches the case of the Japanese farmer, who, "wherever his field is bordered by public roads, footpaths, etc., places casks or pots buried in the ground nearly to the rim, urgently requesting the travelling public to make use of the same." The editor not unnaturally, though somewhat quaintly, remarks on this that the requirements of modern civilization would not permit the purchase of manuring matter, however valuable, at the cost of all domestic comfort. He notices also the difficulty of utilizing our sewage caused by the mass of water which at present necessarily accompanies the fertilising matter, but is of opinion that the future of agriculture is intimately connected with the right solution of this great sewage question; an opinion in which we heartily concur.

It will have become sufficiently obvious from what has been said that this work is one of vast scope and importance. It abounds in information for those whose special subject is husbandry, and, to the general observer, affords a good study of the relative value of theory and practice in an applied science. Their relations cannot be better stated than in Liebig's own words, which may be adapted unchanged to many instances within our department of knowledge.

> "It is a common error," he says, "to fancy that an accurate knowledge of theory will give the power of explaining all cases that occur. Theory of itself does not explain a single phenomenon in astronomy, mechanics, physics, or chemistry; it studies and points out the causes which lie at the foundation of all phenomena, not the special causes upon which an individual phenomenon depends. Theory requires that the causes which govern each individual case should be sought out one by one, and then the explanation is the proof or exposition of the manner in which they work together to produce the particular fact. It teaches us what to look for, and how to employ proper experiments in the discovery."

ARMY SURGEONS ON FEVER—LAWSON, HANBURY, MARSTON.

Dr. Christison, by his recent Address, has added another to the many services which the Medical world owes him. He has struck a just and decided blow at the dogmatism which has recently prevailed in respect of some febrile diseases, and has entered a judicious protest against that over-narrowness of view which is no uncommon accompaniment of advancing pathological research. It is the tendency of all observers, in the presence of new, striking, and precise facts, to contemplate them too exclusively, and to move in too small a sphere, from which vaguer and less understood, but not less real influences, are unconsciously shut out. Such phrases as "modification" and "change of type" in disease are, it is true, somewhat dangerous, as affording scope to careless observation, and often as incurring the logical censure of proving the "ignotum per ignotius." But theories precise and restricted are as great a hindrance to science as laxity and diffuseness; and the pedantic adherent of cramped systems is perhaps a worse Practitioner than one who occasionally indulges in unrestrained speculation.

On the specific subject of fever, we desire to draw attention to some very able documents which have just appeared. A blue-book, issued during the present year by the Army Medical Department, gives statistical, sanitary, and Medical reports for the year 1861. It is doubtless for good reasons that the valuable materials here collected undergo an incubation so protracted. Many of them do not in any way suffer by the delay. This is hardly, however, the case with three papers on fever contributed to the volume. Although they only now come before the public, it must be borne in mind that in authorship they precede the works of Murchison, Tweedie, and other recent contributions to the literature of this subject. We do not in the remotest way desire to detract from the credit of those important monagraphs, but, on a legitimate principle of "suum cuique," we cannot hesitate to award to the labours of our military brethren a high degree of merit and originality.

Robert Lawson, Esq., Deputy-Inspector-General of Hospitals, is the author of "Some Observations on the Influence of Pandemic Causes in the Production of Fevers." He argues the existence of such causes from their constant acknowledgment under various synonyms, such as epidemic cause, influence, or constitution, and pandemic cause or influence. He notices the little that is known about them, and the impediment to the advance of knowledge "by the disposition so strong among Medical writers and observers to regard disease as they individually see it, and to refer its character and prevalence to circumstances affecting obviously the population within their immediate sphere; while, had their investigations been extended to other countries, a similar prevalence of disease might have been found, under local circumstances very different from those thought so essential to its occurrence among themselves, thereby indicating the operation of some cause more extensive than they had reckoned."

He then proceeds to illustrate the question by help of the Statistical Returns of Sickness and Mortality in the Army for a period of nineteen years. The stations of the troops extend "from Ceylon to Jamaica in longitude, and from Great Britain to the Cape of Good Hope in latitude." The numbers are fairly constant and the conditions of life similar, "yet fevers prevail among them, presenting periods of increase and decline with much regularity, and which can often be distinguished at them all." Tabular statements follow, comparing the Ionian Islands, the West Indies, and Jamaica in this respect, and facts are brought forward to show that "little weight can be attached to the evidence sometimes adduced from epidemic disease not having invaded localities under quarantine." The development of yellow fever by causes other than contagion is next considered, and the difficulty of eliminating the influence of local conditions from the problem. Much of this receives a double interest from the recent spreading of yellow fever in France, apparently by contagion, in a locality where it had been before unknown, and not on *à priori* grounds suitable for its development. Perhaps the writer might be led to modify the statement, that "in all cases hitherto brought in evidence it appears that the influence of local causes has never been got rid of sufficiently to allow of the personal receiving that weight by which alone a point so long in dispute can fairly be set at rest." At all events, we should be glad to hear his opinion.

A very elaborate inquiry follows into the mortality from fevers at all stations during a long series of years. From this it is concluded that,—

"The facts detailed showing the regularity and progression of the oscillations of febrile disease at so many points on the earth's surface far removed from each other, and embracing continued, remittent, and yellow forms of disease, leave no doubt as to the operation of some cause equally extensive. There seem to be a series of waves, generated in southern latitudes, which flow to the north or north-west in succession, and, in some instances, these are so close that Canada is under the influence of one, the West Indies of the following one, and a third is apparent at the Cape; a cause extending over continents and seas as this does is more correctly designated pandemic than epidemic, and it would be well were pandemic to come into use to designate that more general influence to which all the others are subordinate."

The progress of the "pandemic wave" is then minutely followed in many quarters, "establishing conclusively the occurrence of a series of oscillations of febrile disease following one another with amazing regularity." Its nature is uncertain; but its constant course from S. and S.E. to N. and N.W. seems to point to the situation of the magnetic poles.

The occurrence of every form of fever under the operation of the same wave is then noticed, and it is stated that as a general rule the peculiar form of fever is that usual to the locality.

"Still there are exceptions sufficiently important to lead to the conclusion that the pandemic cause can determine to a certain extent the resulting form of fever, though local and temporary circumstances may often be more powerful in this respect, and may determine a different form or suspend its operation altogether for the time."

The writer concludes with a suggestion that the same mode of inquiry may advantageously be employed on cholera, diarrhœa, dysentery, and scurvy, and perhaps on other diseases which are not now suspected of secular variation.

Strongly corroborative of the views given above is a paper by W. Hanbury, Esq., Surgeon, 33rd Foot, "On Typhoid Fever in India." He points out that at Deesa, in the autumn of 1859, the morbid anatomy of this disease "was of a kind at least unusual in that country." In ten years' experience of the country he had seen no examples of similar changes of structure in any disease. Space only forbids a more minute analysis of this valuable memoir.

The third contribution is a report on Fever at Malta, by Assistant-Surgeon J. A. Marston, M.D., Royal Artillery. We must return to this next week.

THE WEEK.

PROFESSOR GAMGEE ON CATTLE DISEASE.

The indefatigable Edinburgh Professor is in London this week, lecturing to cow-keepers on the means of averting those costly pestilences which destroy so many valuable cattle every year. We believe we are correct in stating as Mr. Gamgee's principle, that the pleuro-pneumonia, the foot and mouth disease, and the small-pox in sheep, are strictly contagious diseases, imported from abroad, by means of diseased cattle sent to our markets; and that they do not arise spontaneously from any neglect of cleanliness. Hence, without in the least underrating cleanliness, he advocates a kind of quarantine, which shall prevent infected animals from being imported, or purchased, or introduced into stock-yards and dairies. The old dispute between contagionists and anti-contagionists seems likely to break out afresh, both in human and brute medicine, unless men have the sense to learn that each side is right to a certain extent, and that neither excludes the other. It is impossible not to believe that typhoid, for example, ague, various obscure forms of remittent, and diarrhœa, may be actually originated *de novo* in this country from filth. It is perfectly conceivable that with regard to some fevers filth acts, not as an originator, but as the vehicle and *nidus* of pre-existing poison. Again, a disease once set going, may spread by pure contagion even amongst the clean. So there is scope for cleanliness, for isolation or quarantine, and for inoculation, each in its proper place.

LEGISLATIVE ENACTMENTS FOR THE REPRESSION OF PROSTITUTION AND SYPHILIS.

There is little doubt that this subject will come before Parliament, and it is worth while to reduce to order the demands that must be made in the interest of humanity and morals. 1st. We claim power to apprehend and commit to the care of her parents, or to a reformatory, any girl under 21 who openly and notoriously prostitutes herself. The number of young girls—mere children, scarcely knowing right from wrong, who fall into prostitution is terrible to contemplate, and it is quite within the province of the law to enforce the authority of their parents. If it can be shown that any girl has been driven away from home, or encouraged in her evil courses by her parents—a thing too common, alas!—it is but fair that they should be compelled to pay for her maintenance in a reformatory. If a woman of mature age deliberately chooses this vocation, it cannot be helped; but clearly, young girls may be rescued from destruction, even against their wills. This evil admits of no delay, for it is asserted by those who have the best means of knowing that the number of mere children of twelve or thirteen who follow the trade of prostitution is amazingly on the increase. 2nd. Any prostitute infected with disease to be treated as a public nuisance, and shut up till cured. This would apply especially to the poor houseless creatures who infest the neighbourhood of barracks, docks, and camps, or who are found at night crouching about in the parks or public places. 3rdly. The open, flaunting, indecent concourse of prostitutes plying for hire in the streets to be suppressed. If men are determined to seek out prostitutes, let them. But there is no reason why the great thoroughfares of towns should be monopolised by these unfortunates, so as to render them unfit for decent women to walk in; nor yet why every means should not be taken to diminish the present open temptations to debauchery. We do not seek to legalise prostitution, nor yet to license prostitutes; but we do seek to protect young children of both sexes, to make the streets at night fit for decent people to walk in, and to repress, as far as is reasonable and practicable, the habits of vice, and the diseases which follow it.

MEDICAL CLIMATOLOGY.

We learn with pleasure that the science of Medical climatology is about to receive an impetus more commensurate with the wants of the Profession than it has yet received. Hitherto its advancement has depended upon the single efforts of men, who, often far distant from each other, have had few opportunities of interchanging their ideas on the subject. What has been wanting to render their exertions more available to the Profession is now obtained—namely, a focus to which all our information may be directed, where it may be digested, and from which it may be issued in a condensed, instructive, and trustworthy form. We have before us the minutes of several meetings of the Council of the Meteorological Society of Scotland. From one of these we learn that Dr. Scoresby-Jackson, who has for many years devoted himself to the subject, brought the present position of Medical climatology under the notice of the Council, and, after explaining his views, begged that a Committee might be named, with directions to bring up a report, suggesting the means to be adopted for the promotion of the science. This Committee—consisting of Dr. Arthur Mitchell, Mr. Keith Johnston, Mr. Stevenson, C.E., Mr. Cunningham, with Dr. Scoresby-Jackson as Chairman—presented its report at the last meeting of the Council. We quote the following sections of the report:—

"1. That, in the opinion of your Committee, the subject to which they have been invited to devote their attention is one of high importance. Whilst change of climate as a remedial agent has been employed from remote ages, it is notorious that, even in the present day, the rules of practice in the employment of this potent agency are but ill-defined, and that the data upon which the imperfect practice rests are not only insufficient, but also of doubtful character. It is not too much to say that this branch of Medical science has not been developed as it ought to have been, and that it is greatly in arrears considering the advances which have been made in meteorology as a physical science. 2. That your Committee in making the foregoing remarks would have it distinctly understood that they do not attribute the present unworthy position of Medical climatology to neglect on the part of the Medical Profession. They fully appreciate the difficulties which lie in the paths of individual inquirers. They know that so soon as a patieut leaves his home for the winter, the Physician ceases to be intimately acquainted with his condition; the subsequent history of the case is to be learned only—and usually very imperfectly—after the patient's return. If the patient die abroad the history is frequently lost. But even if every case were carefully traced thoughout its career, the information derivable from the limited number which falls to the lot of the average Physician, would be of little value, as compared with the knowledge that would speedily accrue if all Physicians would throw their several littles into a common treasury. It is the want of some such central point, to which all information can be carried, that has caused the present blank in the page of Medical science. In one word, the present unsatisfactory condition of Medical climatology is attributable to the almost total want of trustworthy statistics regarding the physical characteristics and therapeutic influence of the climate of both home and foreign sanitaria. 3. Your Committee believes that the time has arrived at which a public institution such as the Meteorological Society of Scotland ought to use its machinery for the purpose of collecting these statistics. That in so doing the Society would maintain its position—as it has hitherto done—in the van of advancing science; would meet the demands which have lately been created in the public mind owing to the many disappointments that have followed the employment of change of climate as a remedial agent; and would confer benefit upon both the Medical Profession and a large class of the community."

Then follows a comprehensive scheme for obtaining trustworthy Medico-meteorological data from British and foreign sanitaria. The Council of the Meteorological Society received the report most cordially, adopted it unanimously, and resolved to place one-third of the space in their quarterly publication at the disposal of what is now to be known as the "Medical Department" of the Meteorological Society of Scotland. When we consider that this Society consists of members whose interests are diverse, and that hitherto the physicist and the agriculturalist have alone occupied the machinery of the Society, we cannot but congratulate ourselves upon the new element which is now infused into it, whilst we offer our acknowledgments to the Council for the spirited and liberal manner in which they have entertained the claims of our Profession. The Committee, in reporting, "confidently believes that the Medical Profession will willingly afford its support to the Society in conducting such an inquiry." Our brethren will, we feel assured, cheerfully accord their influence in support of this important movement, and we heartily wish prosperity to the Meteorological Society of Scotland in its new undertaking.

FROM ABROAD: BROMIDES IN THE WATER OF THE DEAD SEA—RELATIVE WEIGHTS OF THE BONES—INTERFERENCE WITH PRIVATE PRACTICE IN PRUSSIA—SUCCESSFUL OVARIOTOMY IN FRANCE—"SEALING" OF GUNSHOT WOUNDS—SENSATIONS DURING STARVING—RESIGNATION OF M. TROUSSEAU.

Some recent analyses of the water of the Dead Sea, taken from near the embouchure of the Jordan, laid by M. Roux before the Academy of Sciences, show the extraordinary quantity of 206 grammes of salts per litre (3090 grains in 1¾ pint imperial). No mineral water is so loaded with saline matter or contains so much bromine. It is probable, says M. Roux, that the enormous proportion of bromide of magnesium which it contains may impart to it some special therapeutical properties. A cubic metre of this water contains more than three kilogrammes of the bromide, and it would be of great interest to try its effects in scrofulous cachexia, inveterate syphilis, rickets, disease of the bones, chronic affections of the respiratory organs, etc.

M. de Luca has laid before the *Académie des Sciences* the results of his investigations concerning the relative weights of the bones of the adult skeleton. 1. The bones of the right half of the human body are heavier than the corresponding bones of the left side—this law applying even to the bones of the head. 2. The bones situated above the umbilicus equal in weight those situated below it. (In the erect position of man, the umbilicus represents a central point equidistant from the two extremities, the arms being carried vertically above the head.) 3. The mean weight of the bones of the hand is the fifth part of the total weight of the entire arm, just as the length of the hand is the fifth part of the entire arm. 4. The total weight of the bones of the hand may be divided into five equal parts, one being represented by the carpus, two by the metacarpus, and two by the fingers. The first phalanx represents in weight two-thirds of the entire finger, and the other third is represented by the phalangine and phalangette.

5. As a mean, the bones of the hand weigh one-half less than those of the foot. 6. In the foot the bones of the tarsus weigh double those of the metatarsus, and the weight of the toes may be divided into three parts, two for the phalanges and one for the phalangines and phalangettes. 7. These relative weights hold good with regard to the lower animals.

A case has recently been referred to in one of the German journals, which has roused even Teutonic phlegm, accustomed as this is to constant bureaucratic interferences. A Surgeon, practising in a small town in Silesia for many years past, was startled by receiving the following missive from the Medical Superintending Council of the district:—"It having come to our knowledge that you administered an emetic to a woman in the third or fourth month of pregnancy for the purpose of relieving a severe cough, we beg of you to acquaint us with the grounds of such procedure." The right of this body to superintend the practice of Medical Practitioners, and in this way prejudge it, and do infinite damage to their liberty of action and reputation, is naturally contested. It seems in this particular case the emetic was administered with the best effects, and without any ill consequences; but the Medical Superintendent hearing accidentally that what he considered a *malpraxis* had been committed, at once issued the offensive missive. We have not heard whether the scientific ground assigned for the successful practice satisfied the functionary.

Ovariotomy is no doubt destined to make its way in France, notwithstanding the opposition it may meet with on the part of those who can admit of no improvements which are not of Gallic origin. It were as well that the first operations should all be performed in the provinces, as giving the best chance of that success which will establish the *prestige*. That the Paris Hospitals are not suitable for this purpose may be judged of by the fact that a somewhat analogous operation —the Cæsarian—has never once succeeded in them, although it has often been successful in the country. In confirmation of this view, we may point to the success M. Kobœrle has met with at Strasbourg, and to a case of ovariotomy which has just been published by M. Regnault, of Rennes. The patient was 19 years of age, the ovarian disease dating back about two years. The incision was 15 centimètres in length, afterwards enlarged to 18, and the tumour not being adherent, and having a pedicle of about 2 centimètres, was removed with ease, although some delay took place in consequence of its having been determined to evacuate successively the multilocular cysts, so as to prevent effusion during the operation. The tumour weighed 2500 grammes, 10 or 11 litres of fluid having been discharged from it during the operation. The wound was united by silver-wire sutures and long, thin pins, care being taken to traverse the peritoneum at about a centimètre from the incision, so as to bring the serous surfaces in contact. The clamp was removed on the eighth day after the operation, and, notwithstanding some vicissitudes in the progress of recovery, the patient was able, on the twentieth day, to descend three flights of stairs unaided. Six weeks have now elapsed since the operation, and she is perfectly well.

Dr. Howard, of the U.S. Army, makes known a mode of treating gunshot wounds of the chest or abdomen, which he has found very successful, and which he terms treatment by "hermetically sealing." All accessible foreign bodies having been removed, he passes a sharp-pointed bistoury perpendicularly to the surface just beyond the contused portion, and pares the entire circumference of the wound, so as to convert it into a simple incised wound of an elliptical form. (In incised or punctured wounds this paring process is dispensed with.) He dissects away all the injured parts down to the ribs, and brings the edges of the wound together with silver sutures, deeply inserted at not more than a quarter of an inch apart. The surface is then carefully dried and freely covered over with collodion. For greater security, a few shreds of charpie are arranged crosswise over the wound, and also covered with collodion, the process being repeated on drying until the wound is securely cemented over. Over all this a dossil of lint may be fastened by means of adhesive strips. If there be tendency to undue heat, it may be kept down by cold affusion, and if the dressing gets loose, collodion must be re-applied. The sutures are not to be removed until union by first intention is complete. If suppuration occur, so as to cause distressing dyspnœa, the case must be treated as one of empyema, a trocar being introduced into the most dependent part, and care being taken to avoid the admission of air. Dr. Howard states that by following this practice much more speedy recovery is obtained than by the ordinary procedures.

A Medical student in the University of Pavia strongly desirous of possessing a microscope, but wholly destitute of the wherewithal to pay for it, resolved to live entirely on vegetable food until he had amassed the necessary sum. This resolution was sternly acted upon, and he gives the following account of the remarkable effects this regimen produced upon him:—

> "I am," he says, "of a delicate constitution, scrofulous in appearance, and bilious in temperament, but endowed with an energetic will. My habits have been those of an industrious student. 250 grammes (62½ drachms) of vegetables or fruits, together with 250 grammes of bread, constituted my sole daily food during four months. Two litres of water were also taken. At first I suffered from painful digestion, gradual enfeeblement of the cerebral faculties, profound melancholy, disturbed dreams, and general prostration,—in fact, all the antecedents of some serious disease. But I triumphed over these by force of will, and at the end of ten days these phenomena were replaced by others no less strange. My nervous system now exhibited an incredible impressionability, an exquisite sensibility having replaced the confusion of my sensations. My brain was in one constant vibration, the most insignificant reflections and the most natural thoughts causing me exaggerated moral emotions, which were reflexed as physical sensations on some part of my body. Sometimes a sudden delirium seized me, and I then found ideas succeeding each other in my brain with frightful rapidity, as in a transport of rage. To these crises I opposed the resistance of my will, but this resistance itself determined in my limbs, and especially in the upper ones, slight paroxysms of chorea, which lasted for two or three hours. My appetite, generally regular but slight, at times became so brutally aroused, that I should have preferred satisfying it with half raw meat to any other aliment. My thirst was natural, but at times I was seized with a furious desire for spirituous drinks. The urine, devoid of transparence, habitually neutral or alkaline, became acid when exercise was taken. The sexual desire was entirely annihilated, with the exception of one attack of erethism of extraordinary violence. The last characteristic I have to mention is a nightly vision of a wonderful banquet, sparkling wines filled deep cups, gigantic joints exquisitely roasted, prodigious quarters of savoury venison were invariably present at these imaginary repasts. My appetite, then uncontrolled by the slumbering will, made up in the dream for the privations of reality, and the palate during sleep revelled amidst these delicious dainties."

The Medical public of Paris has learned with great astonishment and regret that M. Trousseau, perhaps the most distinguished Clinical Professor the Paris school has produced, has expressed his desire to retire. Although yet young both in body and mind, zealous and devoted to the cause of Medical teaching, and apparently still destined to worthily fill a yet prolonged career, he is said to long for repose. The news of his determination has caused something like consternation among the pupils, and they have got up a petition to the Minister of Public Instruction, calling upon him to refuse acceptance of the Professor's resignation. It was at once loaded with signatures.

Royal College of Surgeons of England.—Professor Fergusson, F.R.S., of King's College, has been elected Professor of Human Anatomy and Surgery in the vacancy occasioned by the resignation of Professor Solly, F.R.S.

NOTES ON SOME OF THE PARIS HOSPITALS.

(From an Occasional Correspondent.)

(Continued from page 419.)

HÔTEL DIEU.

The Hôtel Dieu is a curious old place, and it would be well if the threat of removing it were carried into execution, but it is very central, and in a good situation for an Hospital, and I understand the new one will be built towards the suburbs. It contains 866 beds, and is made up of four separate buildings, connected with each other by means of passages under ground and over the Seine, and the wards are long and narrow, some of them making a turn at one end, where they are divided into three or four little wards or rooms. They are crowded with beds, the windows are kept closed, and in summer it is almost suffocating, even early in the morning, at the time the Surgeons go round. One morning I was obliged to leave a ward, or I think I should have fainted, and I am sure living in one of them for a fortnight would make me hectic.

M. Trousseau is here, and in going round with him the English student will be astonished at the small quantity of medicine which he, as all French Doctors, gives—a few boxes of pills, which the sister of the ward keeps, form the extent of his dispensary, and only one medicine is given at the same time; at present M. Trousseau's favourite medicine appears to be belladonna, and I understand that he gave turpentine to all patients and for all diseases in the winter.

M. Maisonneuve goes round every morning, and gives a clinique on Mondays, Wednesdays, and Fridays, after which he performs what operations there are. Here, again, the large number of beds spoils the interest of the cases inside, and there is little to notice in going round, except, perhaps, his applications, of which he has two—the "acide phenique" (a disinfectant, applied where there is any suppuration), and glycerine, which is put on all granulating and healthy ulcers. Fractures are put up in splints, made of folded linen steeped in a mixture of equal parts of plaster of Paris and water, and a bandage put on; the splints are dry and stiff in half an hour, and the following day the bandage is removed, and the splints merely kept on by means of a little strapping. In all fractures not requiring extension this seems an excellent plan of treatment, and good results are obtained. From the cases I have seen here I fancy it is the bad support which makes the mortality in the Parisian Hospitals so high. Two cases under M. Maisonneuve have died from exhaustion, one from a not very bad compound fracture of the leg, and the other after excision of the elbow, and in both instances the men were taking nothing stronger than vin ordinaire, which is no better than coloured water, and everyone knows that French dishes do not contain an excess of nourishment. I have twice seen M. Maisonneuve inject varicose veins with tinct. ferri perchloridi, and in both instances the veins became hard and consolidated in a few days, and he states that he has never known any accident result. In one clinique M. Maisonneuve advocated the use of a little nitrate of silver put on the end of a probe for the radical cure of hydrocele; he says it has never failed to produce the necessary amount of inflammation, and in his hands has always been followed by good results. He also mentioned two cases where he used it to excite inflammation in a hernial sac for the radical cure, and with perfect success. He is also a great advocate for the use of caustic in the removal of tumours; he uses what he calls his "flêches," flat, triangular pieces of, I believe, equal parts of chloride of zinc and starch. In a breast thus removed he passed a scalpel deeply into the base of the cancer in fourteen places, and inserted a piece of flêche in each incision; at the end of ten days the breast came off, leaving a healthy granulating wound; but the woman was very old, and succumbed to bed-sores. I have also seen him perform another little operation, which is common in Paris, and of which, I believe, he is the originator. He says that in what we call fissured anus the contraction of the sphincter is the real disease, and the fissure of only secondary consideration, and the treatment adopted is to pass two fingers into the rectum, and to stretch the sphincter to a great extent. The operation produces some ecchymosis, and partial paralysis, for a day or two, and no doubt cures by rupturing some of the fibres of the sphincter; it is very painful, and the pain continues for a short time after the operation. I have never been fortunate enough to see M. Maisonneuve amputate, but I saw him remove a tumour one day, and after the operation he put lint and spt. vini into the wound; the former to prevent primary union, which he does in all cases, and the latter, I believe, to prevent pyæmia.

M. Jobert is also at this Hospital, and he gives a clinique on Tuesdays, Thursdays, and Saturdays. If he has any specialty it is in uterine disease, not that there is any special appointment for diseases of that nature, for all the Surgeons use the speculum, and treat uterine disease, but he has a great many cases of that nature. The actual cautery is his great remedy in disease of the neck of the uterus, and sometimes there are as many as half-a-dozen cases of applying the hot iron after a clinique; it gives no pain whatever, and the only evidence the patient has is the unpleasant, frizzling noise, followed by a smell of burnt flesh. His treatment of fracture is the very opposite to that of his colleague; he disapproves of all bandages, as causing the muscles to waste, and merely slightly raises and retains the limb in a kind of wire cradle. Where there is no displacement the result is good, but in more complicated cases some crooked and shortened legs result.

(To be continued.)

REVIEWS.

The Home Nurse, and Manual for the Sick Room. By Esther Le Hardy. London: Churchill and Sons. 1863. Fcap. 8vo. Pp. 450. Price 6s.

The preface of this book contains some sensible observations on the division of labour between the sexes in the great work of alleviating human suffering. The authoress willingly grants that man, with his greater energy and intellect, ought to take the place of the Physician, whilst woman, with her greater tenderness and delicacy—(we will add greater patience and self-sacrifice)—is best adapted for the office of nurse. She proposes therefore not to write a Medical work, but one on the minutiæ of those real sick room duties which fall to the nurse's share. We have often before said that works of this class deserve the attention of Medical reviewers, inasmuch as they may greatly help or hinder the Physician, according as they teach truth or error. We will therefore see what kind of Home Nurses a study of Mrs. Le Hardy's work is likely to produce.

Chapter 1 contains general observations on health, on the absurdity of universal medicines, on habit, on female education, and on many other matters, and, with some grains of good sense here and there, is wordy and tedious, not to say flippant. When will fine writers leave off those platitudes about the supposed healthiness, happiness, and virtues of wild beasts? "They satisfy," says Mrs. Le Hardy, "all their desires in moderation, and diseases are unknown to the denizens of the forest." Are they? Did she never hear of boa constrictors or cows in clover? of tigers and foxes who eat till they are filled, and then slay for the mere lust of blood? and of mangy old foxes and lions, and of all the parasites that afflict the brute creation?

Chapter 2 treats of Air. Here, too, we find some sensible remarks, such as on the folly of some parents, who will begrudge their daughters no finery, and yet deny them the comfort of a fire in their bedroom, etc.; but there are the same spasmodic attempts at fine writing, and the same tediousness.

Chapter 3, on Exercise and Rest, has the same characters.

Chapter 4, on Cleanliness and Baths, is very confused and meagre; omits a great deal that ought to be said, and gives many finicking rules, which are utterly absurd, *e.g.*, that the water of a footbath should not come above the ankles. If the authoress had told poor people (and rich too) how to wash themselves and children most comfortably and economically she would have done good.

Chapter 5, on Dress, shows the utility of carded cotton next the skin for warmth, as a cheap and unirritating substitute for flannel. But there is a spurious fig-leaf modesty and want of charity throughout the observations on dress. Mrs. Le Hardy says that girls are educated as mere man-traps, p. 15, and utters bitter words against wearers of crinoline, p. 107. But it is absurd to suppose that women may not show their ankles or their bosoms innocently. You may have modesty completely unclad, and lasciviousness muffled to her eyelids.

Chapter 6, on Diet, contains a little sense, but more of the opposite. The recommendation of tepid water for drink is nasty.

Chapter 7, on the Sick Room, contains useful practical hints, so does the next, on Practical Duties. But they are infested with fine writing and squeamishness, and lack arrangement. For example, a nurse, desirous of knowing how to keep a patient's bed free from being soiled by urine, would in vain look for such a naughty word in the text or index. An old-fashioned article in the bedroom is called a "chamber vase." The remarks on vermin are practical, and the authoress has a new and original method of catching fleas; but any sense is sense alloyed by some absurdity, as where she advises wives to learn to shave their sick husbands. They will get their husbands' leave first, we suppose.

Then follows Chapter 9, on Moral Duties, which seems excellent; and Chapter 10, entitled "The Patient," which, we suppose, is intended for persons who are still in health. It is chiefly on religious topics. Chapters 11 and 12, on Visitors and Amusements, are both full of excellent advice.

Chapter 13 treats of Bleeding, and gives useful hints upon the way to apply leeches; but the authoress is not up to the best modes of stopping the flow of blood. Moreover, she makes a sad bungle of the way to check flow of blood from a vein after a bleeding at the arm. She is quite in error, too, in supposing that a man's hat acts like a cupping glass on the skin of the head, or that hats cause baldness, or that men are more often bald than women.

Chapter 14 speaks of lotions, issues, blisters, and plasters, and, with some useful matter, contains a very rash and dangerous method of counter-irritation by laying a piece of blotting-paper, soaked in spirit, on the skin, and setting this on fire! The directions for washing and wiping wounds are much below the mark.

The next three chapters treat of Emergencies, Home Ailments, and Sundries, and, we are sorry to say, are full of absurdities; all the more to be regretted, that they refer to matters purely Medical, which are dragged in contrary to the promise of the preface. The directions for carrying home a man who has broken his leg, are no directions at all, and omit what really ought to be told, *i.e.*, how the broken limb should be handled. Persons who are stunned by a blow on the head are ordered to be stung with nettles! Persons who have swallowed a wasp are advised to gargle with a piece of blue stone, the size of a hazel nut, in a small teacupful of water. Now, such a piece of blue stone weighs forty grains, and if a small teacupful of water equal six ounces, the remedy is not an agreeable or safe one. "When any extraneous matter is lodged in the throat"—(the authoress does not specify whether larynx or pharynx)—"if space admits, pour mustard and water down into the stomach to act as an emetic, or apply some nauseating scent to the nostrils to produce the same effect." We do not learn what "nauseating scent" should be used. The authoress does not hesitate to recommend tracheotomy, "if any one can be found of sufficient coolness and resolution," but does not say a word about putting a finger down the pharynx to feel for and dislodge the "extraneous matter." She recommends bruises to be treated by "a small scratch with a needle to let the blood out."

For *coup de soleil* nettles are again advised; not a word about cold affusion. For suffocation, also, and apoplexy, not a word about cold affusion. For hemiplegia, strong mustard lotions are advised to the "parts affected!" For convulsions we are told to put a child in a bath at 95 up to the arm-pits. Why not up to the chin? Under the head of croup (for which the authoress has a *cure*), we have in solemn form the old mistake of conceiving the common enlarged follicles of the tonsils with greyish white or chalky matter in them to be something terrible. For the bite of a mad dog the sufferer is told to "give a good blow just above the part!" Hiccough has its seat "indubitably in the vocal tubes." When a paroxysm of hysteric fits "threatens," the sufferer is to be placed on the floor, and "three buckets of water are to be dashed strongly into the face." That some girls who have hysteric attacks may be naughty passionate creatures, who deserve a souse with cold water or even a whipping, we do not doubt, but we must say that any one who would put in practice such a merciless rule indiscriminately would deserve more than three buckets of cold water. Cases in which such a practice is pursued are apt to appear before coroners and quarter sessions. Persons with swelled feet are told "to stroke the limb always downwards, not rubbing up and down, the object being to effect the flow of the circulation towards the feet and extremities."

Amongst curiosities we have the following:—

"*Lime-water Bath.*—To a bath containing about 25 buckets of water, break up about 12 pounds of fresh burnt quicklime, with which half fill a bag, and throw it in. Let the lime become extinguished, when the patient must get in, and remain from half an hour to forty minutes, when place him in a warm bed, wrapped up in a blanket, and a most profuse perspiration will ensue."

We hope that Mrs. Le Hardy's readers will take care that the bag is sound, and their patients' skins, too.

"*Glass Poultice.*—Take a pint of bread crumbs, mix them with boiling water, and incorporate well with them an ounce of finely pulverised glass, and apply to the abscess. To prevent the use of the lancet."

The chapter on Cookery seems good. Chapters on Religion, on the Chamber of Death, and on the Poor conclude the work.

Altogether it is a disappointing performance. The writer would have done far better if she had been less ambitious, and had in simple, modest language, and one-fourth of the space, described the duties of a home nurse from her own experience. In Medical matters she is decidedly very much behind the time, and many useful appliances for the sick room are not noticed at all (such as the hot water bag, bran poultice, etc.), whilst their place is usurped by a host of things, many of which are useless. It is agreeable to add that the writer is sensible and fair in her remarks on our Profession, without any quackish tendency, and we can't help wishing that the work had been revised by one of us. It would have been far more useful to our Profession, for nothing is more useful than to be aided by skilful nurses. What does she mean by "*conjugalis obedientum?*" Does she suppose that these mystic words are Latin for a hen-pecked husband? A careful revision would have got rid of this blunder, as well as of many other things which disfigure a book which shows the writer's good intentions, and her want of knowledge alike.

Conférence Internationale, pour Examiner les Moyens de Pourvoir a l'insuffisance du Service Sanitaire dans les Armées en Campagne. Geneve.

After a form of invitation to the Conference at Geneva, on the 26th of the current month, this pamphlet sets forth a scheme for establishing national committees in each of the countries joining the league, "to remedy by all means in their power the insufficiency of the sanitary service officially constituted for armies on campaign."

Towards the furtherance of such object, in time of peace, the Association will occupy itself with sanitary improvements for the troops, Hospitals, ambulances, and conveyances for wounded. In time of war each nation will furnish an organised volunteer corps of attendants—"*infirmiers*"—who will engage to serve for a limited period, and not in any way to interfere in military operations. They are to wear an uniform or distinctive badge; their persons are to be sacred, and under the protection of both belligerents. They are to march in the rear of armies at their own expense, and to be under the same military discipline as the regular Hospital attendants.

Extracts from the *Journal de la Societé Vaudoise d'utilité Publique*, in reference to Solferino, which battle appears to have given origin to the plan, also from the *Journal des Débats* and the *Journal de Genève*, speak favourably of the proposition.

The Surgical Diseases of Children. By Thomas Bryant, F.R.C.S. London: John Churchill and Sons. 1863.

These are the Lettsomian Lectures delivered before the Medical Society of London in the present year. The author states that they "have already appeared in the pages of one of the weekly Medical journals, and it is owing to the kind reception with which they have been favoured, and the solicitations of friends," that they are reprinted. They deal principally with certain modifications of disease due to infancy, and contain some good illustrative cases.

Dr. Leared has been elected an honorary member of the Icelandic Literary Society of Copenhagen.

GENERAL CORRESPONDENCE.

◆

THE EASTBOURNE WATER.

[To the Editor of the Medical Times and Gazette.]

Sir,—I send you the result of the analyses, made for me by Dr. R. Dundas Thomson, of the Eastbourne water, which was mentioned in my Special Report, published in your Journal of Saturday last. I am, &c.

London, October 20. Your Special Commissioner.

Eastbourne Water.

	Total Impurity.	Volatile Matter.
Well water . .	23·30	1·92
Reservoir water .	27·20	1·60

Neither of these waters contained any unoxidised organic matter.

THE ARMY MEDICAL DEPARTMENT.

[To the Editor of the Medical Times and Gazette.]

Sir,—Permit me to express my thanks for the able exposition, in your leading article of the 17th inst., of what the standing of Medical officers in the army ought to be. It is unreasonable to expect that gentlemen of liberal accomplishments and fair family, as well as of professional education, will come forward to compete, even for the honour of holding Her Majesty's commission as an Army Surgeon, if they are to be subject to all the limitations of personal liberty essential for military discipline, to give up their civil rights, and be bound by martial law, and yet, at the same time, to be looked upon and treated as mere *army followers*. Yet this is what some persons high in authority are seeking; that while the combatant officers, the officers in charge of supplying food, the officers in charge of stores of all kinds, shall have authority in their respective spheres, the Medical officers, who feel their importance in the army and grave responsibilities, shall have no authority in theirs; nay, not only this, but that they shall have no status or authority in the ordinary affairs of the social military sphere of which their own lives are made part and parcel. It is neither fair, no more than it is wise, to seek to establish such a system; but it is not only some of the combatant authorities, but also some high in position in the Medical ranks who seem to be advocates for it. The occupant of an administrative office and the professor may well be content with such a status, for they have virtually given up the uniform of military for the garb and manners of civil life; but if they advocate it for the Surgeons of the army, they inconsistently cast aside their own former views and feelings when they were Surgeons themselves. If the organisation of such a system be persisted in, no doubt a certain number of candidates for Medical commissions may be obtained, and be worked up, besides, to a given standard, just as in civil life persons are found to take charge of Unions at servants' wages, on almost any terms that Poor-law guardians may dictate, and yet be holders of University or College degrees; but to the combatants, to the officers and private soldiers, the policy is little better than suicidal. They will be the real sufferers; it is on their account that the public ought to see into the matter. It is repeated on all sides that the Medical officers who have been entering the army the last two or three years have been, with individual exceptions, gradually retrograding as a class. The conversation of those already in the army, both high and low, shows that they are thoroughly dissatisfied, and their acts prove it also. The seniors, with very few exceptions, try to quit the service as soon as they can do so with any claim to pension; many are now urging, as the great boon to be sought for, an earlier opportunity of leaving it. So little fondness do they contract for the career with which the best part of their lives' associations are mixed up, that such a thing as a Medical officer training up a son for a like career is scarcely ever heard of; and while they are engaged in their really noble and useful calling as Surgeons, instead of their commission and their Profession filling them with honourable pride, they appear to seek every opportunity in public of concealing them. No one who knows the army intimately can say this is not true. Such extensive dissatisfaction is most pregnant with evil; the full amount of the evil, if it continue, will probably never be known, until, as the dying Sir James Outram said, some great war shall occur; and it is well worth the pains of administrators to investigate its causes and apply the necessary remedies in time. The violation of the Medical Warrant of 1858 has unsettled all faith in the honesty of such documents; yet, even now, if it were restored in its entirety, if all the privileges and advantages promised in it were faithfully fulfilled, there is little reason to doubt but that contentment in the Medical Department would be gradually restored also. I will conclude with a quotation from the remarks of a recent writer in the *Medico-Chirurgical Review* on this suject.(a)

"It is a most important thing for every officer and private soldier that his Surgeons should be capable men. If the combatant officers think the Warrant of 1858, and the advantages it gives, are too dear a price for this they are much mistaken. Their lives, their happiness, and the happiness of those related to them may be, nay, *must* be, influenced by the character of the Surgeon who has to preserve their health or to restore it. No price is too dear for this, and if the combatant officers are wise, they will do all in their power to make the position of the Medical officers honourable and pleasant, and to attract the best of the rising Medical men into their service." I am, &c.

Army Surgeon.

REPORTS OF SOCIETIES.

◆

THE PATHOLOGICAL SOCIETY.

Tuesday, October 20.

Mr. Prescott Hewett, President, in the Chair.

The President, in taking the chair for the first time this Session, hoped the Society would flourish as well as it had hitherto done. He alluded to the very large number of specimens exhibited at the last meeting, and to the long list for the present one. The volume of *Transactions*, which would be ready in a few days, was as good as any previous volume. It was impossible to say more of it. He alluded also to one evident proof of the prosperity of the Society—viz., that there were eight applications for the membership. Lastly, he specially directed the attention of the members to the ventilation of the room, as certain alterations had been made, and it was important to know if they were improvements.

Dr. Murchison showed specimens of

LOOSE BODIES FROM A HERNIAL SAC AND FROM THE PERITONEUM.

The specimens illustrated the mode of formation of these bodies. One was loose in the sac of a hernia, and the other was attached to the intestine, being one of the appendices epiploicæ coated over by layers of a dense concentric material.

Dr. Murchison also showed specimens of

CALCAREOUS DEGENERATION OF THE ARTERIES OF THE FORE-ARM.

It was found three weeks before death that the patient, who was only 30 years of age, had no pulse in the radial nor in the tibial arteries. The radial arteries were to be felt in hard, rigid cords, but did not pulsate in the least. After death the coats of these arteries were found much diseased, but not obstructed, but the larger arteries were healthy.

Dr. Crisp thought that the great peculiarity of the case was, that there was absence of pulsation without occlusion. He believed the case was unique in this respect.

The President said that he had not unfrequently seen the smaller arteries diseased when the large ones were quite healthy, and related a case in point.

Mr. Hicks then exhibited a specimen of

OBSTRUCTION OF THE BILE-DUCTS BY A GALL-STONE.

The patient, a woman, 60 years of age, in St. Thomas's Hospital, under the care of Dr. Barker, had been ill four or five months. She had had jaundice, but this disappeared before death. After death the cystic and common duct were found to be completely obstructed by a gall-stone. The liver was fatty, very few liver cells being found.

Dr. Harley remarked on the great interest of this case in relation to the diagnosis of the various kinds of jaundice by examination of the urine.

Dr. Gibb exhibited a specimen of

SUPRA-GLOTTIC ŒDEMA OF THE LARYNX,

from a patient under his care at the Westminster Hospital, who died of acute pulmonary tuberculosis. He had had aphonia on and off for two years, but persistently for six weeks before his admission, with severe dysphagia. The laryngeal mirror showed œdema of the false cords and epiglottis with tuberculous ulceration. The laryngeal symptoms subsided under treatment, but the pulmonary disease was too advanced to permit of recovery.

(a) The *Brit. and For. Med.-Chir. Rev.*, No. 72, April, 1863, p. 362.

Also a drawing of

DESTRUCTION OF THE EPIGLOTTIS,

in a gentleman aged 27, with disease of the throat for four years, described as phagedenic, associated with painful dysphagia and varying aphonia. He could not swallow fluids at all, and only pultaceous solids, and expectorated a large quantity of mucus in the twenty-four hours. Laryngoscopy showed extensive ulceration of the aryteno-epiglottic folds and false cords, with entire destruction of the free portion of the epiglottis. The mucous membrane of the nose and fauces was also much ulcerated. In six weeks a permanent cure was brought about, the patient being able to swallow any kind of food.

Dr. **Gibb** likewise exhibited specimens and drawings of

POLYPOID GROWTHS SUCCESSFULLY REMOVED FROM THE LARYNX.

The first was from a gentleman aged 52, with hoarseness and aphonia for eighteen months. These symptoms depended upon a warty growth at the posterior part of the larynx, which much interfered with the approximation of the vocal cords at that part. After its removal, the voice and general health greatly improved, but the laryngeal tone of the former was persistent for some weeks. The second was from a young lady aged 25, with aphonia for fifteen months, but having an occasional hoarse whisper. A growth was found in a similar situation to that in the preceding instance, with a large apex resembling a bunch of feathers. It was removed one Sunday morning with the assistance of Dr. Routh; the voice immediately improved, and was subsequently lost two or three times from attacks of cold. There was a strong tuberculous tendency in this patient.

In reply to Dr. Murchison, Dr. **Gibb** stated that the tumours were fibro-cellular, and consisted of epithelial scales with a little fibre.

In reply to Mr. Hinton, Dr. **Gibb** said that as yet none of the tumours he had removed had returned.

In reply to Mr. Hulke, he pointed out that by sub-glottic œdema he meant œdema below the vocal cords. The distinction was a practical one. Supra-glottic œdema might be dealt with readily by scarifying the parts, but sub-glottic œdema often necessitated tracheotomy.

Mr. **Lee** stated that the exact position of the various kinds of œdema of the glottis had been pointed out by the President some years ago.

Dr. **Quain** asked as to the nature of the ulceration in the case of destruction of the epiglottis, and how the patient was able to swallow?

Dr. **Gibb** believed that the epiglottis had been destroyed by potassa fusa. The patient could swallow pultaceous matter, but not fluids.

Dr. **Brinton** said that he had examined several specimens of growths from the larynx, and the majority were not fibro-cellular but epithelial, being, indeed, little more than warts.

Dr. **Gibb** said that the tumour he had removed consisted of epithelial scales with a few fibres.

Dr. **Andrew Clark** asked as to the exact character of the epithelial cells, and drew attention to the importance of considering these tumours not only as to their interfering with the organs of voice, but as to their structure as diseased tissues. It was desirable to take the opportunity of studying the transition between a simple wart and epithelial cancer. It would seem, he said, that certain conditions of irritation exhausted the power of development of a part, and at the same time stimulated its growth. He wished for accurate information as to the exact kind of epithelial cells found in the tumour.

Dr. **Gibb**, in reply, said they were squamous.

The **President** said that the view taken by Dr. Andrew Clark was a very important one. He recommended that Dr. Gibb should transmit any other tumours he might remove to Dr. Clark, in order that Dr. Clark might report on them to the Society.

Dr. **Peacock** exhibited a

SPECIMEN OF MALFORMATION OF THE HEART,

consisting in an entire obliteration of the orifice of the pulmonary artery by the adhesion of the curtains of the semilunar valves. The trunk of the pulmonary artery was pervious, and the valves formed an imperforate septum, stretched across the orifice. The septum of the ventricles was complete, but the foramen ovale was largely open, and the supply of blood to the lungs had passed from the aorta into the open ductus arteriosus, and so into the pulmonary arteries. The case was especially interesting in that the malformation, contrary to the usual rule, had occurred at the later period of intra-uterine life, when the septum of the ventricles was already completed. The child only survived nine days, and was cyanotic.

Dr. **Peacock** also exhibited

VARIOUS SPECIMENS OF FIBRINOUS SPUTUM MOULDED IN THE BRONCHIAL TUBES,

which had been expectorated at intervals by a gentleman who laboured under chronic bronchitis. At the periods at which the so-called "bronchial polypi" were coughed up, considerable quantities of blood were expectorated. The patient had a large excavated ulcer in the right tonsil and uvula, which was regarded as syphilitic. Another case in which fibrinous sputa were expectorated occurred in a gentleman labouring under secondary syphilis,—a coincidence which, considering the comparative rarity of the affection, was noteworthy.

Dr. **Harley** then showed seven specimens of

GALL-STONES.

They were passed by one patient. Dr. Harley said that the usual plan of seeking gall-stones was an imperfect one. They were, he said, rarely found floating on the surface, but generally at the bottom, and were only to be detected by frequent solution of the fæces in water. The peculiarity in the specimens was the large quantity of cholesterine they contained, about 95 per cent.

Dr. Crisp exhibited the following

SPECIMENS FROM THE LOWER ANIMALS.

1. Several hundred dried tubercles from the liver of a Stanley crane, for the purpose of showing the large amount of earthy matter in them. 2. The bladder of a horse with a calculus weighing twenty pounds. The animal was an old agricultural horse that did slow work until the time it was killed. It was blind, and drank at a pond always after the other horses, when the water was turbid. For five or six years before death the micturition was frequent and often difficult, but the presence of a calculus was not suspected. 3. A piece of the spleen of a bull that died of splenic apoplexy. The spleen weighed twenty-four pounds, from recently extravasated blood. Fourteen pigs that ate the blood of this and other oxen that died of this disease were killed by it. Dr. Crisp had examined the throats of these pigs, and he found a whitish false membrane covering the root of the tongue and pharynx. Dr. Crisp alluded to the recent experiments of M. Devaine, in France, respecting the presence of *Bactria*, so-called, in the blood of animals dying of splenic apoplexy. He (Dr. Crisp) had often seen these bodies in splenic apoplexy and in other diseases, and had mistaken them for crystals, and it would, he thought, be important to ascertain whether they existed in the human subject in diseases of a low type.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, October 7, 1863.

Dr. **Oldham**, President, in the Chair.

Dr. D. **Carlyle** and Dr. W. P. Price were elected Fellows.

Mr. **Sequiera** exhibited an Anencephalous Monster, with Photographs.

Dr. **Druitt** read a case, and showed drawings, of Secondary Syphilis after Vaccination.

Dr. **Leishman** read a note of Associated Hydrocephalus and Spina Bifida in a child nine months old.

A case of Dilatation of the Os Uteri by the Sea-tangle (Laminaria digitata) to procure Abortion was read by Dr. **Prichard**.

Dr. **Greenhalgh** exhibited two specimens of

DISEASED CERVIX UTERI,

which he had removed that afternoon with the wire écraseur of Weiss. The first, a specimen of epithelial cancer, involving the whole of the posterior, and extending to the anterior lip of the womb, was removed from a married woman, under the influence of chloroform, and scarcely any blood being lost. The second was a specimen of simple hypertrophy of the neck of the womb, two inches and a-half in length, and five and a-quarter in circumference, taken from a married woman, aged forty-one years, who had one child twenty years ago. Her labour was lingering, and her recovery protracted. She complained that about seven years ago her "womb gradually came down," since which it had never returned, whether in the upright or recumbent position. She had experienced so much local discomfort, and it was such a barrier to sexual connexion, that she begged that something might be done for her relief. No blood was lost during or after the operation. Dr. Greenhalgh remarked that this affection, uncomplicated with procidentia uteri, is of rare occurrence, and is frequently taken for and treated by pessaries as the latter affection, to the great annoyance of the patient and aggravation of the disease. He had now operated upon four such cases with perfect success.

Dr. Barnes observed that he had used the instrument of Mr. Weiss for the removal of fibroid polypi in several cases very successfully; but he preferred the instrument of Dr. Hicks, which was less cumbersome. With regard to the method of removing the vaginal portion of the cervix uteri, he thought the operation of Dr. Marion Sims—which consisted in amputating by a cutting instrument, and covering the stump by flaps of mucous membrane brought from behind and before—had a considerable advantage over ablation by the écraseur. By Marion Sims' operation the healing was much accelerated, and a better os was preserved. He (Dr. Barnes) had performed the operation with a most satisfactory result.

Dr. Routh said that he had also operated, and successfully, in several cases; but while he admitted the usefulness of the écraseur, and its advantages in preventing hæmorrhage, he doubted if it might not subsequently preclude impregnation. The cicatrizing always left the os puckered and contracted, so as to give rise occasionally to dysmenorrhœa. None of his patients, nor those he had ever operated upon, so far as he knew, had had children, or even miscarriages, afterwards. This might be accidental, on which the experience of Fellows might throw a new light. If, however, barrenness followed the use of the écraseur, Dr. Sims' operation, which enabled the accoucheur to retain the os in a patent condition, was to be preferred.

Dr. Braxton Hicks was glad to hear Dr. Greenhalgh's good opinion of the instrument, inasmuch as it was a slight modification of his (Dr. Hicks's). Indeed, in the course of construction of his instrument he had adopted the drum and endless screw as used by Weiss, but had afterwards discarded it, because it was found that the length of wire rope which could be used by his was practically as long as required, as might be seen on referring to the *Obstetrical Transactions*. He had also removed many times the cervix uteri by different écraseurs without any untoward symptom. He thought that the occlusion of the os uteri, if it occurred, might be overcome by a bougie as easily as in the operation of Marion Sims.

Dr. Graily Hewitt considered the écraseur objectionable in cases of hypertrophy of the cervix where the bladder was drawn downwards with the cervix, inasmuch as there was a liability to injure the bladder. He had seen cases where the portion of the cervix situated above the vagina was greatly elongated, and in which the écraseur could not have been used for the above-mentioned reason. In the other class of cases, where the hypertrophy was limited to the vaginal portion of the cervix, the écraseur could be safely and advantageously used.

Dr. Henry M. Madge gave

NOTES OF A CASE OF CHRONIC HYDROCEPHALUS.

The subject of the notes was the seventh child. Of the six brothers and sisters, five died from convulsions before they were a year old. The surviving sister is troubled with scrofulous sores. After birth the patient thrived very well up to the ninth month. Teething then commenced, accompanied with convulsions. There was severe brain and meningeal symptoms for several weeks; and, on their subsidence, the head was perceived to be enlarging. Measurements of the head were taken from time to time, which showed that in three months its circumference had enlarged from nineteen inches to about twenty-three inches; the other measurements, from ear to ear across vertex and from root of nose to occipital protuberance, undergoing corresponding changes. Measurements of the fontanelles were also taken, and observations made on the cranial sutures. After arriving at the above dimensions, the head gradually lessened in size, and became stationary at about twenty-one inches in circumference. Before the illness, the child showed signs of intelligence in the usual childlike way; subsequently the little intelligence she had entirely disappeared, reappearing after a blank of several months in a low form—namely, that of imitating sounds, followed, at a later period, by mental manifestations of a somewhat higher order. The general health throughout was but little affected. She is now three years and a-half old. The size and shape of the head have remained the same for some time past; but the body grows rapidly. Some of the faculties are particularly active. The treatment most relied on was the administration of short courses of mercury with chalk, and the application of blisters to the nape of the neck and behind the ears, kept open for a very long time. The paper was accompanied by diagrams showing the changes effected in the size and shape of the head during the progress of the disease.

Dr. Thomas Ballard said that Dr. Madge's paper contained a history in detail of the ordinary course of a case of chronic hydrocephalus, many examples of which might be seen in any of the institutions devoted to the reception of idiots. He did not agree with the author in attributing the disease to any diathetic error inherited from the parents, neither did he believe that the irritation of teething had any effect in causing the disease. Indeed, he was quite convinced that the doctrines usually held and taught regarding the etiology of convulsive diseases of infants were erroneous, and consequently the treatment deduced therefrom not the best. He believed that œdema of the brain, which was the pathological condition existing in all these cases, resulted from a state of mal-nutrition, the consequence of a disorder of the stomach and intestines, which was caused by an excessive secretion of gastric juice, continually produced by reflex action when a child has to suck excessively to obtain its food, and which effort he designated "fruitless sucking." The green diarrhœa of infants, and the chronic state of diarrhœa which always precedes hydrocephalus, are the evidences of the existence of this injurious condition. The treatment deduced from these views is very simple, and eminently successful. It consists of arresting the diarrhœa by attention to the sucking, feeding the child well upon milk, and treating the symptoms of pressure on the brain in their early stages by the abstraction of blood by leeches; the symptoms indicating the use of leeches being repeated acts of vomiting, or vomiting during sleep or any form of fit. He was of opinion that had the case described in the paper been treated on similar principles the result would have been as favourable. He felt that he was justified in making protest against views which he had worked honestly and earnestly to elucidate, and had brought under the notice of the Profession in the same spirit, being designated "crotchets." He earnestly invited attention to them, and had no doubt that if he were allowed the time and opportunity he would be able to demonstrate their truth to any of the Fellows of the Society.

Mr. Owen, in agreeing with Dr. Ballard in regard to some of the points on the feeding, differed from him in the suggestion of free and continuous leeching in a case like this, where a tubercular diathesis evidently existed. Mr. Owen considered that the Society was indebted to Dr. Madge for his report, and congratulated him on the favourable termination of the case.

Dr. Barnes submitted that an absolute etiological theory ought to apply to all the cases of the disease. Now, the accoucheur knew well that hydrocephalus was a congenital disease; that it arose *in utero*.

Dr. Routh must say that he believed Dr. Ballard's views to be important and true in many cases. He had repeatedly seen fruitless sucking from an exhausted mother, or from the sweetened piece of flannel to keep them quiet by ignorant nurses, produce diarrhœa and green stools, and, after a time, head-symptoms, and hydrocephalus. But he did not say this was *always* the result observed. Dr. Madge's paper was important as illustrating—first, the effect of a strong tubercular diathesis in inducing hydrocephalus, spite of his skilful supervision and treatment; secondly, as proving by actual measurement the marked diminution of the fluid effused. The diminished size of the head (as indeed at one time was stated by the parents of this very girl) is too often erroneously inferred, because, owing to the growth of the other parts of the body, it seems to be smaller. He thought, however, these cases would bear calomel to a larger extent than given by Dr. Madge. He (Dr. Routh) instanced an example similar to the present, in which idiocy was impending, where ten grains of calomel one day and five the next were given successively for three weeks. A cure resulted. The young man was now alive and full grown, and with intellect unimpaired. Without recommending these excessive doses, still he thought full doses of calomel were often well borne in chronic hydrocephalus, appearing to act in this affection chiefly through the kidneys.

Dr. Graily Hewitt congratulated Dr. Madge on his paper, and on his success in the treatment of the case. Some years ago he had himself succeeded in arresting the disease in its acute stage, and the patient completely recovered. The remedies he had used were very extensive counter-irritation over the scalp by means of tartar emetic, and liberal administration of stimulants.

Dr. Madge, in reply, wished to state that he had not brought the case forward as anything extraordinary, but simply as an illustration of a rather common form of disease. Dr. Ballard had given an opinion that the condition of the patient was caused by "fruitless sucking," and by "overlooked or neglected diarrhœa," and that the treatment had been altogether wrong. Dr. Madge considered there were no grounds whatever for such an opinion. It would be difficult to say what amount of so-called "fruitless sucking" had taken place in this or in any case, but it was a mere assumption to say that it had taken place at all, and a still more groundless assumption—as it was removed from all scientific and reasonable probability—that "fruitless sucking" could have caused such grave symptoms as those recorded in the paper. These symptoms could be explained on much more rational principles. The evils of fruitless sucking, he thought, had evidently been greatly exaggerated. The theory had doubtless been erected on a few exceptional cases. As to diarrhœa, there was a marked absence of it in this case; aperients had been frequently necessary—a state of things usually accompanying nervous disorders, or a predisposition to them. He had heard nothing that evening which would induce him, in a similar case, to deviate much from the plan he had adopted. There was no doubt much to deplore in the present condition of his patient, but the result was better than could have been anticipated under the circumstances.

MEDICAL NEWS.

Royal College of Physicians of London.—At a General Meeting of the Fellows, held on Monday, October 19, 1863, the following gentleman was duly admitted a Fellow of the College :—

Edward Smith, M.D. Lond., 16, Queen Anne-street.

At the same Meeting the following gentlemen, previously Extra-Licentiates, were admitted Members :—

Mark Hamilton, 7, Arundel-street; John Jones, Springfield, Upper Clapton.

At this Meeting the following gentlemen, having undergone the necessary Examination, and satisfied the College of their proficiency in the Science and Practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College :—

Thomas William Colbeck, Ramsey, Hants; Leonard Emanuel, M.D. St. Andrews, 6, Stanley-gardens, Notting-hill; George Smith Delavil Harris, Haxey, Bawtry; Frederick Thomas Hindle, Askerne, near Doncaster; Hermann Johnston Jones, M.D. Heidelberg, Springfield, Upper Clapton; Frederick Joseph Keene, Holbrook, Ipswich; Alexander Thorburn Macgowan, New Brompton, Kent; Harry Gage Moore, Lymington, Hants; Richard Wagstaff Smith, Handsworth, Birmingham.

The following gentlemen were reported to have passed the First Part of the Professional Examination for the Licence of the College :—

Robert W. S. Barraclough, Guy's Hospital; Henry W. Freeman, Middlesex Hospital; Henry C. Hilliard, Guy's Hospital; William Nathaniel Hiron, Sydenham College, Birmingham; Charles Perks, Queen's College, Birmingham; Alfred Edward Wilmot, Guy's Hospital.

At a former Meeting of the College held on the 30th ultimo, the following gentleman was admitted a Fellow of the College :—

Matthew Stovell, M.D. Aberdeen, Bombay Army.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, October 15, 1863 :—

John Edwin Jenkins, Stow-on-the-Wold; Robert Dunlop, Drumhead, Dumbartonshire: Richard Prior Wintle, Kensington; Henry Law Kempthorne, King's College Hospital; David Dunlop Costine, Liverpool.

The following gentlemen also on the same day passed their First Examination :—

Robert Wooding Sutton Barraclough, Guy's Hospital; Robert Wrentmore Thomas, St. George's Hospital.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Anderson, Mark F., L.R.C.P. Edin., has been elected Honorary Medical Officer to the Coventry and Warwickshire Hospital.

Cooke, B. Barrington, L.R.C.P. Ed., has been appointed Consulting Medical Officer to the Royal Northern Sea-Bathing Infirmary.

Downing, Samuel D., L.R.C.P. Lond., has been appointed Medical Officer of the New Workhouse, Birkenhead.

Earle, J. Lumley, M.D. St. And., has been appointed Surgeon-Accoucheur to the Queen's Hospital, Birmingham.

Wilders, John St. S., M.R.C.S. Eng., has been appointed Surgeon to the Queen's Hospital, Birmingham.

Winterbotham, Washington L., M.B. Lond., has been appointed Surgeon to the Bridgewater Infirmary.

DEATHS.

Bullmore, William Hy., L.K.Q.C.P.I., at Princes-street, Truro, on October 5, aged 63.

Diaper, Dr., Surgeon at Chunar, East Indies, on July 31.

Dickinson, J., M.B., at Chibisa, Africa, on March 17, aged 33, late of Jarrow, Durham.

Fulham, John, L.R.C.S.I., at Shop-street, Drogheda, Ireland.

Hutchinson, F. C., M.D., at The Cottage, Brisco, near Carlisle, on October 6, aged 71.

Hutchison, Robert, L.F.P.S. Glasg., at Auchinleck, Ayrshire, on September 27, aged 44.

Mackellar, F., M.D., at Glenesk, New South Wales, on June 18, aged 52.

Parsons, Charles Heygate, Surgeon, in practice prior to 1815, at West Haddon, Northamptonshire, on October 17, aged 69.

Roger, Alphonse Rene, M.D., at the Maison Impériale de Charenton, France, aged 48.

Swift, Henry, M.R.C.S. Eng., at St. Anne-street, Liverpool, on October 7, aged 60.

Royal College of Surgeons of England.—The following members of the College, having been elected Fellows at previous meetings of the Council, were admitted as such on the 15th inst., viz. :—Messrs. Thomas Bennett Humphreys, of Trinity-square, Tower-hill, diploma of membership dated October 16, 1840; George Edward Dunsterville, Cape of Good Hope, August 13, 1841; and George Taylor, of Derby, May 6, 1842. At the same meeting of the Council, Mr. Arthur Martin, of Liverpool, a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, his diploma bearing date May 8, 1860, was admitted an *ad eundem* member of the College.

Medical Students.—The October registrations of those gentlemen now pursuing their studies at the various metropolitan schools having been brought to a close, it appears that the gross number amounts to 1009. In 1860 there were 1228, which was reduced in the following year to 1124, again being reduced in the past year to 1045. Owing to the removal of St. Thomas's Hospital, Guy's now takes the lead in the number of its students, amounting to upwards of 200, and from the high position attained by these gentlemen at the University of London, the large number now being educated at the Hospital is not surprising. St. Bartholomew's, which runs its rival very close, also prides itself on the equally respectable rank attained by the students at Oxford and Cambridge. The Irish and Scotch returns are not made until November, when the session commences in those parts of the dominions. The provincial returns are not ready.

Suspected Criminal Poisoning.—On Wednesday last an inquest was held at Mile-end on the body of Ruth Blythe, aged 22, who was alleged to have been poisoned. The Surgeon, Mr. William Godfrey, who made the post-mortem examination, deposed that the body was well developed, and presented no external signs of disease. The lungs were healthy. The peritoneum was inflamed, and lymph was effused on the lower intestines. The stomach was of a bright vermilion red throughout. There were about six ounces of dark fluid in the stomach. There was no other symptom of disease. The stomach and its contents had been sent to Dr. Taylor for analysis, but the result of the analysis had not been ascertained. The inquest was adjourned.

SMALL-POX AT OTAGO.—The New Zealand papers speak of an outbreak of small-pox at Otago. Sixteen persons were suffering from the disease on August 3, and three deaths had taken place.

THE DUDLEY AND WOLVERHAMPTON MYSTERIES.—No fresh details of Medico-legal interest were forthcoming at the adjourned inquest. The coroner's jury returned an open verdict of "Wilful Murder against some person or persons unknown."

A NOVEL PRESENT.—The Council of the Royal College of Surgeons, as custodians of the Hunterian Museum, often receive some very curious donations for that interesting collection, but for novelty, nothing to compare with one lately received from China; not a chest of the flowery Pekoe, or jars of Chow-chow, or Mandarin oranges, not even some preserved ginger, but a tub of pickled feet, "chopped off," so the catalogue states, from the fair bodies of the Celestial beauties, and are now exposed to the vulgar gaze, as showing the effects of compression applied at an early age. One young lady must have suffered very much, for independent of the compressing process, there appears upon her "poor feet" two circular ulcers, the result no doubt of the artificial pressure. Another preparation—for there are no less than eleven—shows the deformity (as Mr. Flower, the conservator of these treasures, ungallantly calls them) carried to the greatest degree; the foot being shortened and bent upon itself, by an exaggeration of the natural arch, the heel and the distal ends of the metatarsal bones being brought as near together as possible, the lower tarsal bones being forced up, so as to make a considerable prominence on the instep. The outer toes are doubled under the sole. It may be mentioned that the length of the foot from the heel to the great toes is just four inches and a quarter. Mr. "Barbarian" Flower makes up for his want of gallantry by giving, with such scrupulous exactness, the size of the dear little feet, that no doubt the Mandarins' ladies will forgive him for writing about distortions and deformities.

METROPOLITAN WATER SUPPLY.—The following letter from Mr. Alfred Smee appeared in the *Times* of the 21st. In many districts the Metropolitan Officers of Health are complaining of the deficient Sunday supply of water to the houses of the poor. A monopoly is as dangerous a possession for a company as for an individual, and we see no reason why Mr. Smee's suggestion might not be carried out with great benefit to the public:—

"SIR,—While London cries for a further supply of water, it is not generally known that there exists at Grays, in Essex, a series of fissures, or underground rivers, which pour their water into the Thames, and the yield of which is estimated at upwards of 10,000,000 gallons a-day.

"Some of this water is used for the supply of Brentwood, and Romford will be supplied in two or three weeks, but the remainder is absolutely wasted, notwithstanding that it is destitute entirely of organic matter, and is of a quality declared by the Government Commissioners as the best which is obtainable for the metropolitan supply.

"I have been anxious that this water should be utilised in London, and the attention of the New River Company and East London Waterworks has been called to it without success; therefore I should be glad to ask, through the medium of your columns, whether, if an independent company were to seek Parliamentary powers to supply London with the Grays water, the support of the inhabitants could be depended upon?

"My own house is constantly without water on Sunday evenings, and so, independently of the nuisance, if any trifling fire occurred, there would be no means of obtaining water to extinguish it.

"I remain, Sir, your obedient servant,
"7, Finsbury-circus, October 20. "ALFRED SMEE."

THE LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—The Winter Session was opened on October 1, the Introductory Lecture being delivered by Mr. E. Batty. We regret that we can only give a short extract from his address, and we select the following as useful advice on a subject too often neglected both by students and teachers:—"I would also direct your attention to the cultivation of those accomplishments which will relieve the severe studies of your Profession; it is a vulgar prejudice, which still holds with weak and uneducated persons, that to be eminent in the Medical or any other profession the less you have to do with other sciences than your own the better; but like many a sorry weed, it has a deep root in uncultivated ground. Read the lives of great Physicians and Surgeons of the past; they have been scholars and men of science and of taste, possessing knowledge and accomplishments in no small degree out of the course of their Profession. In all professions, provided he knows his own thoroughly, the more he knows out of his peculiar pursuit, the more enlightened is that man, and the better able to follow his own occupation with success and originality. I allude to the art of drawing, and painting or colouring the objects as they are presented to you in your attendance on Hospital practice. They will at all times refresh your memories in days to come, when the object has ceased to exist, and elucidate the copious notes you may have made of the disease. I refer you to the beautiful engravings in Anatomical Surgery by C. Bell, Esq., Surgeon, from his own drawings. I would by no means exclude a knowledge of music where there is a taste for it. So eminent a man as Sir William Herschell was known as the best drummer in the Hanoverian army, and also skilled in other instruments; and thus by gathering up the fragments of time he became the friend of monarchs and first of astronomers. Eminent members of the judicial bench have been noted for their musical attainments. Lord Palmerston's occupation is mathematics during travelling." After the conclusion of the address the prizes were distributed by the Chairman, Mr. John Cropper, as follows:—*Principles and Practice of Surgery*—Medal, J. P. Irvine; Certificates, J. C. Rosselloty and R. H. D. Johnson. *Principles and Practice of Medicine*—Certificates, R. H. D. Johnson and J. C. Rosselloty. *Anatomy, Physiology, and Pathology*—Senior Class; Medal, J. P. Irvine; Certificate, J. H. Gornall. *Descriptive and Surgical Anatomy*—Junior Class; Medal, W. H. Burgoyne. *Chemistry and Pharmacy*—Medal, H. Sewill; Certificate, H. M. Steele; Special Book Prizes, H. G. Samuels and R. Leigh. *Midwifery, Diseases of Women, and Diseases of Children*—Medal, J. P. Irvine; Certificate, J. Houghton. *Materia Medica and Therapeutics*—Medal, J. P. Irvine; Certificate, F. Long. *Medical Jurisprudence and Toxicology*—Book Prize, J. P. Irvine; Certificate, G. Griffith. *Botany*—Certificate, R. Leigh. *Ophthalmic Medicine and Surgery*—Book, J. P. Irvine. *Practical Chemistry*—Book, R. A. Mowll; Certificate, R. Hughes. *Pathological Anatomy*—Medal, G. Griffith; Certificate, J. Houghton.

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

Dr. J. G. Wilson.—The paper shall appear very shortly.

Scalpel.—Such announcements are so commonly made in provincial and local papers that we do not think one can fairly be singled out for publication.

Mr. H. Napier Draper.—Dr. Althaus' "Treatise on Medical Electricity," published by Trübner and Co., Paternoster-row, contains a full description of electricity applied by Faradisation.

Sigma.—The "University of London Medical Graduates Act" (17 and 18 Vict., cap. cxiv.), referred to by our correspondent, gives to the Bachelors and Doctors of Medicine of the University of London the same title to practise as is possessed by Bachelors and Doctors of Medicine of the Universities of Oxford and Cambridge; but does not in any way sanction the assumption of the title of Doctor by Bachelors of Medicine,—an assumption which is distinctly repudiated by the University.

OZONE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—From a letter by Mr. W. C. Burder, of Clifton, in the *Times* of the 28th ult., and noticed in your Journal on the 3rd inst., it would appear that the circumstance of ozone accompanying the winds from off the ocean was a fact newly discovered by that gentleman. It is only right therefore to state, that as far back as 1850, in a paper read before the Royal Medical and Chirurgical Society, London, I directed attention to the same circumstance, and proved it beyond a doubt by a lengthened series of recorded daily observations and correspondence from various parts of the world.

The paper was printed and embodied in a little work on "The Climate of Worthing," published by Messrs. Churchill and Sons, and which has from time to time appeared in your advertising columns. It is satisfactory, however, to find that the evidence therein given is supported by so trustworthy an observer as Mr. Burder.

I have, moreover, expressed a conviction—and every new fact tends to prove it—that the so-called ozone in the atmosphere is not that principle, but free chlorine, developed by the decomposition of the chloride of sodium contained in the water of the ocean; but whatever be its nature, there can be no doubt of its purifying influence on the atmosphere, and that it is one of the causes of the beneficial influence of the sea air in pulmonary consumption, scrofula, and other diseases of debility.

I am, &c. WALTER G. BARKER, M.B.

18, The Steyne, Worthing, October 20.

Promotion in the Army Medical Department.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—If the Director-General is desirous of ascertaining the wants and wishes of the Army Medical Department, he will find them briefly detailed in a letter appearing in your issue of 26th ulto., signed "A Sufferer for many Years." The sentiments therein expressed, and the desiderata which the writer particularizes, are such as can hardly fail to command the general approbation of his brethren, and if adopted would tend greatly to allay existing discontent, and attract to the service a style of recruits socially and professionally superior to those recently admitted. Your correspondent justly regards promotion by seniority in all grades as of paramount necessity, in comparison with which all other concessions are valueless and unimportant.

I can hardly believe, Mr. Editor, that you approve the practice of selecting a junior on the alleged plea of superiority to step over and supersede any number of his seniors. Promotion by selection is theoretically plausible, merit being the ostensible plea, but in practice it is fraught with much injustice, it is entirely repugnant to the sentiments and sense of Medical officers, who regard it as an exercise of authority which has not and cannot be satisfactorily employed.

The result of its operation has justified the statement made by Dr. Mapleton in his evidence before the Royal Commission that "in nine cases out of ten the Director-General will not select the best men." (*Blue Book.*) Were this power of selection withdrawn from the Director-General he would be inaccessible to solicitation—a Minister at War, or Commander-in-Chief would be powerless to procure promotion; Dowb and Becher would have to bide their time. and the members of the Department would no longer be disheartened by the suspicion or certainty that a junior had received advancement unworthily. It can be readily understood why an upright Director-General, exposed to influence in high quarters, which he may not have the resolution to resist, should feel sincerely desirous to "wash his hands" of this obnoxious privilege of selection, and consign it to the inflexible and impartial rule of seniority. This seems to have been the opinion and desire of Sir Andrew Smith, who says at page 39 of the *Blue Book*, "I cannot say that I am satisfied with the system of promotion vested in myself, because if I could see my way without sacrificing the public service, I would earnestly entreat to wash my hands of the promotions. I would have nothing to do with promotions."

Were this done we should not have so frequently to regret the injustice inflicted on the service by a selection "which in nine cases out of ten does not promote the best men," and by prematurely advancing unworthy individuals, the Department is dispirited, and the Director-General discredited and distrusted. I am, &c. Alpha.

Hunterian Society.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I have requested Mr. Devenish, the Secretary of this Society, to remove my name from the list of members, and having received no reply to two consecutive letters, I shall be glad to mention the fact in your pages, and to add the following explanation:—

In the session 1861-2 some frivolous charge was allowed to be brought against me during a discussion upon tea and muffins in the Council Room, and the Secretary was moved to demand of me an explanation. This gentleman, however, instead of acquainting me with the nature of the charge and the name of the complainant, required me to answer a series of questions which my Medical friends deemed insulting and improper—one question even asking for a list of my patients.

I protested mildly against such a style of doing judicial business, and wrote to say that I would attend and afford every explanation at the next Council Meeting, but on that occasion, although I was detained half an hour, it was decided not to admit me, and principally I believe in deference to the objections of the virtuous complainant, who had pledged the others to secrecy as to his having spontaneously come forward to serve the society in this matter. I subsequently forwarded a rough outline of the affair out of which this question arose, but the council, or some persons acting in their name, ignored my statements, and passed a vote of censure upon my conduct.

Such a proceeding, of course, became a fertile subject for gossip, and as the actors therein seemed to fancy their conduct needed justification, it also became the basis of some remarkable representations. I myself, however, have never been able to learn the charge which was brought against me, and these persons had neither precedent nor bye-law empowering them to use the name of the society in the way they did.

The injunction to secrecy notwithstanding, I afterwards learnt that Mr. John Jackson, of Spitalfields, had performed the part of Iago, although this gentleman was the very last to whom I should have imagined myself likely to be indebted, inasmuch as he had just previously entered my study in the garb of friendship, and, under pretence of talking over the affair out of which this question arose, had perused my private correspondence in connection with it. Of course, this fact also elucidated his reluctance to take credit for bringing me to justice.

I wrote repeatedly to Mr. Jackson, but I met with nothing but evasion, and I concluded that he was one of those who, when behind a man's back, do not scruple to make insinuations which they hesitate to repeat to his face. The distinguished men who, in name, still remain with this Society know nothing of the way in which, in this case, their names were prostituted, and I brought this charge forward incidentally in the *Medical Times* of September 6, 1862, but it remains unanswered, and since then I have lost no opportunity for challenging the proceeding; but while a perhaps wise discretion has kept its promoters out of print, they have spared no effort for underhand misrepresentation, and I therefore appeal to the press—that palladium through which a single and obscure individual can always brand a clique with its conduct, or drag it forth to the bar of unbiassed public opinion; and while it may be that my own conduct will be thought to require some apology, yet I trust that the importance of the principles which have been violated and trampled upon will justify me in having asked for the public ear.

I am, &c. James Edmunds, M.D.

85, Finsbury-circus, October 20.

COMMUNICATIONS have been received from—

Mr. Charles Hunter; Scalpel; Sigma; Apothecaries' Hall; C. K.; Royal Medical and Chirurgical Society; Mr. W. Carr; Mr. R. J. Rogers; Dr. J. G. Wilson; Royal College of Physicians; Mr. J. B. Curgenven; Mr. H. Napier Draper; Dr. Aldis; Dr. W. G. Barker; Alpha; Dr. A. E. Sansom; Mr. C. Carter Blake; Obstetrical Society of London.

BOOKS RECEIVED.

Seventh Annual Report on the Health of the Parish of St. Marylebone, 1862. By Robert Dundas Thomson, M.D., F.R.S., Medical Officer of Health for the Parish. Printed by order of the Vestry.

⁂ When Dr. Thomson claims a high rate of salubrity for the Cavendish-square district he would make his statement more exact were he to say what share of the good state of health is due to the place and what to the people; otherwise things are compared which no more admit of fair comparison than the schoolboy question, if a dozen of pears cost a shilling, how much will two dozen herrings cost? Let it be granted that the site, elevation, subsoil, drainage, and broad, open, airy streets cause Cavendish-square to be more healthy than the slums of Lisson-grove, yet what a difference between the mortality of the opulent professional man's or gentleman's family in the one, and that of the litter of an Irish costermonger's in the other! Amongst people who have love of life, knowledge, temperance, and the power to procure all necessaries and luxuries, including change of air, it would be odd if their mortality were not less than those of the opposite class, even though they were to live in Lisson-grove or Bethnal-green instead of Cavendish-square. Overcrowding as a cause of infection and sickness, syphilis, infant mortality, and the death-rates of districts, occupy the writer in turn. Cavendish-square is shown to be eminently healthy, even when compared with country districts. The impurities in water and improvements in drainage follow next, including the purification of the ornamental water in the Regent's-park by diversion of sewage. Tables of mortality and other numerical matter conclude a valuable Report.

The Home Nurse, and Manual of the Sick Room. By Esther Le Hardy. London: John Churchill and Sons. 1863.

The Journal of Dental Science. October, 1863. London: John Churchill and Sons.

Neubauer and Vogel on the Urine. Translated by William O. Markham, F.R.C.P.L. London: The New Sydenham Society. 1863.

Transactions of the Ethnological Society of London. Vol. II. London: John Murray. 1863.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 17, 1863.

BIRTHS.

Births of Boys, 1001; Girls, 938; Total, 1939.

Average of 10 corresponding weeks, 1853-62, 1675·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	607	598	1205
Average of the ten years 1853-62	534·3	530·6	1064·9
Average corrected to increased population..	..	..	1149
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	1	7	15	1	..	8	4
North ..	618,210	11	6	31	4	3	13	7
Central ..	378,058	6	..	12	1	3	4	3
East	571,158	5	2	31	4	2	15	6
South ..	773,175	6	2	25	4	3	15	6
Total.. ..	2,803,989	29	17	114	14	11	55	26

APPOINTMENTS FOR THE WEEK.

October 24. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

26. *Monday*.

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

Medical Society of London, 8½ p.m. Clinical Discussion.

27. *Tuesday*.

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

28. *Wednesday*.

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

29. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

30. *Friday*.

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

◆

LECTURES
ON
THE BLOOD, LYMPH, AND CHYLE OF VERTEBRATA,

DELIVERED AT
The Royal College of Surgeons of England,
DURING THE SESSION OF 1863.

By GEORGE GULLIVER, F.R.S.,
Professor of Comparative Anatomy and Physiology to that College, and late Surgeon in the Royal Regiment of Horse Guards.

LECTURE III.—*Supply of Red Corpuscles—Analogies and Homologies—Hewson's Researches on the Use of the Lymphatic System—Repetition and Elucidations of his Experiments—Distribution of Lymph-Corpuscles—Red Corpuscles in Lymph.*

Supply of Red Corpuscles.—In the last lectures we gave an account of the agency of the red corpuscles in the formation of the buffy coat of the blood, which concludes the formal description of the structure, function, and relations of these bodies; and now we come to a consideration of the source of their supply to the breathing animal. Though no physiologist supposes these or other parts of the blood to be permanent or unchangeable, it has never been proved that the red corpuscles are regularly multiplied by division after birth, nor even in the fœtus during the later months of utero-gestation, whatever may be the case in early embryonic life. Nor has the ordinary supply of red corpuscles in Apyrenæmata ever been proved to come in any other way than from the pale cells of the blood or lymph-corpuscles; while we shall soon see that these have an origin extraneous to the blood, however they may be perfected or developed therein; and we shall attempt to prove that the lymphatic system and its appendages is a special provision for the production of foundations of the quantity of red corpuscles required for the service of respiration in the higher classes of the vertebrate sub-kingdom. But, while entertaining this view, and adducing evidence in its support as we proceed, it is by no means intended to assert that red corpuscles, as in certain cases of disease, and in the reparation of injuries, may not be produced on the spot, just as we well know pale cells are, quite independently of lymphatic vessels and glands.

Analogies and Homologies.—So that here may be a temporary or occasional process in the higher animals, beautifully analogous to the permanent or constant economy of lower creatures, such as Invertebrates without a lymphatic system, and yet with coloured or colourless blood-corpuscles; and so, too, as regards the temporary red corpuscles of the early mammalian embryo, which appear before that system, and have the type, as regards size and structure, of those of lower vertebrates; for we have already seen that this primordial mammalian red corpuscle has a distinct nucleus and cell-wall, so as to be the equivalent, prototype, or homologue of the mature or regular red corpuscle of Pyrenæmata. But the permanent or mature red corpuscle of Apyrenæmata is a very different object; and—admitting the validity of the discovery by Mr. Wharton Jones of the genesis of this corpuscle, and of my prior observation of these corpuscles in their red and entire state as nuclei of abnormal pale cells,—in its free and perfect condition this corpuscle of Apyrenæmata is not only destitute of a nucleus, but possesses neither the physical nor chemical characters of a nucleus. The red corpuscles quickly disappear under the influence either of acetic acid or water, and will not form a ropy compound with solutions of alkalies or of alkaline neutral salts; while lymph-corpuscles and nuclei of both pale and red cells are not so affected by the acid nor by water, but regularly become misshapen and partly dissolved so as to produce a ropy and nearly transparent grume in combination with the alkaline or saline reagents, though no such effect is produced by them on the red corpuscles; and striking as this chemical difference is, I know not that it has ever been noticed in our books of physiology and animal chemistry. The red corpuscle of Apyrenæmata, then, has no known homologue—only itself can be its parallel—and the terms now current for it, as "red blood-nucleus" and "cellæform nucleus," might be well discarded for the old one of red corpuscle. Thus far of it as a whole; its vesicular part was always emphatically represented by Hewson as the homologue of the cell-wall of the red corpuscle of Pyrenæmata; and this conclusion is supported by the recent and original experiments of Dr. William Roberts, which involve other important views of the structure of the red corpuscles throughout the vertebrate sub-kingdom. The terms Pyrenæmata and Apyrenæmata, as shown in former lectures (*Medical Times and Gazette*, September 13 and December 13, 1862), will suffice as the most certain, universal, and fundamental diagnostic ever before proposed for the two great divisions of the vertebrate sub-kingdom—to wit, that lower or oviparous section in which the nucleus of the red corpuscle regularly exists, and the highest or mammalian class which is as regularly devoid of any such nucleus.

Hewson's Researches on the Use of the Lymphatic System.—Just ninety years have elapsed since Hewson communicated a short notice of his views to Dr. Haygarth, of Chester, concerning the formation of the red corpuscles of the blood, concluding his letter with the expression that he had no doubt of being able to prove his positions whenever he might have leisure to handle the subject more fully. That leisure was never allowed him, as he died prematurely within a year afterwards. But "The Third and Remaining Part of the Observations and Experiments of the late Mr. William Hewson" was soon published by his young brother-in-law, Magnus Falconar, whose ingenuous fidelity has thus happily preserved for us an account of the successive steps of this interesting inquiry, so remarkably in advance of the knowledge of the time in which he lived, as to fall with little effect for that generation. Hewson's doctrine, though so pregnant of instruction, was either unintelligible to, or neglected, or contemned by his contemporaries and immediate successors. Indeed, the first indications by him of a cell and its nucleus, with the formation of a vesicle around a central particle, and the production of the red corpuscle thus, were utterly forgotten for more than half a century afterwards, when fresh minds, with new and improved means of research, fully confirmed and realised the general accuracy of his main conclusions.

Of these, passing by or touching but lightly on some of his smaller speculations or errors, we propose to give an account to-day, not only from the historical interest of the subject, but also because it involves questions of great importance, which must always be very interesting to physiologists, and which have of late received a large share of attention both in Germany and Britain, while the valuable labours of our illustrious young countryman have recently been entirely ignored at Würtzburg and Berlin, and treated in England with little less contempt. But though so disingenuously used at present in Germany, his labours met with much more respect there formerly; for in the year 1795 a Latin version of his works was published at Leyden by Dr. Hahn, just twelve months after the death of Mr. Hunter. Still, even this great man, who was Hewson's immediate predecessor in that remarkable school at Great Windmill-street, had never perceived the value or importance of Hewson's inquiries, but, indeed, always seemed to resent the red corpuscles as a sort of impertinence, and persisted in this kind of depreciation long after the completion of Hewson's researches; and Hunter, who was born eleven years before Hewson, did not die until twenty years after him. They had been friends, or were, at all events, well acquainted personally, as Hewson lodged on his arrival in London in 1759 with Mr. Hunter; and, as already mentioned, succeeded him as assistant to Dr. Hunter in the dissecting-room. In fact, the obstinate ignorance of Mr. Hunter concerning this very fundamental part of the physiology of the vertebrate sub-kingdom, which Hewson was exploring with a success so creditable to British science, was one of those deplorable defects of Hunter's public character as a teacher, which, as regards the blood, was only expiated by the almost exclusive manner in which his mind was so long occupied by his researches concerning, and his beautiful exposition of, the vital endowments of the coagulable lymph.

It was in vain that Hewson, twenty years before Hunter's death, was correcting the injurious errors of Leeuwenhock and his school, and propounding or establishing instead great truths about the blood-corpuscles; in vain that Hewson so originally and profoundly displayed the development, structure, and diasmotic force of a cell; equally vain, too, for that age, his wise statement that the "red particles of the blood are conveyed to the different parts of the body to answer the purposes of nutrition and vivification, and that the thymus is necessary to perform an office in the early part of life depending on respiration" (282, 263). Nor was more attention paid to his masterly proofs that this gland is an appendage to the lymphatic system for the formation of "central particles" (as he always called the corpuscles of lymph) at that very period of life when they are most required for sanguification. With the singular exception already mentioned, I do not know that any of his successors, for nearly half a century, ever properly examined, repeated, or took the slightest trouble about his experiments; not even so far as to share his conviction of the great importance of the red corpuscles in the animal economy, and that parts of such moment must have some particular provision for their formation, some special organs for this purpose.

These organs he announced, as the result of an admirable series of experiments and observations, to be the lymphatic vessels and glands, the thymus, and the spleen, a view then so paradoxical that nobody scarcely thought it even worth examination; and so, as far as Hewson's inquiry was entertained or accepted, the office of all those glands remained as recondite as ever. He concluded that the use of the thymus and of the lymphatic glands is to form the central particles or foundations of the red corpuscles, which he declared was as easily proved, and in as satisfactory a manner as you can show the use of any other viscus in the human body, that is to say, by opening these glands and examining the fluid contained in their cells, which will be found full of little solids or central particles, and which are taken up from these glands by the lymphatic vessels to be conveyed to the blood, and thence to the spleen, where he believed they acquire the red superficial part. But, besides having these glands set apart for making the red corpuscles of the blood, he observed that they are also formed in the lymphatic vessels in different parts of the body, so that the thymus and lymphatic glands are merely appendages to the lymphatic system for making the pale central particles, and the spleen another appendage to the lymphatic vessels for forming the vesicle or red enveloping part of the blood corpuscle.

After describing the distribution of the blood-vessels on the lymphatics, so that these last also may have the requisites of a gland, he cuts into one of the fresh glands and examines microscopically the fluid which is contained in its cells, describes the numerous central particles which that fluid contains, and concludes that they are absorbed by the lymphatic vessels arising from the cells of the gland and carried by those vessels into the circulating blood. Thus he regards the efferent lymphatics, originating from the cells of the gland, as equivalent to the excretory ducts of other glands, and that we have the same proof that the lymphatic glands secrete this pale juice, and that it is carried from them by the efferent lymphatic vessels, as we have of other glands separating different fluids and having well known excretory ducts. For if we cut into a lymphatic gland we find its fluid, and if a ligature be made on the lymphatic vessels emerging from this gland, we find the same fluid contained in these vessels. Thus we have a proof as convincing of the lymphatic vessels being the excretory ducts of the lymphatic glands as that the hepatic duct is the excretory duct of the liver. We know that the liver secretes the bile, because we find it in this viscus; and we know that the hepatic duct is its excretory duct, because we find the bile contained in it. "The proofs are similar and equally conclusive" (252).

Extending the same kind of experimental inquiry to the thymus, like results were obtained. He accurately describes the opaque whitish fluid of this gland, and that the colour of this fluid is entirely owing to central particles not distinguishable from those of the lymphatic glands; and when he tied a string around the lower part of the thymus of a living calf he found a great number of lymphatic vessels full of this white fluid, one of them being so large that at first sight it had the appearance of an excretory duct, but on further examination it was proved to be only a very large and distended lymphatic vessel. The fluid contained in these vessels was carefully examined, and said to be identical with that in the gland. He saw no difference whatever between these fluids after a careful microscopic and comparative examination of them. The size, number, and all other characters of the central particles appeared the same, nor could he perceive any difference at all between the fluid in these turgid lymphatics and that in the glands.

Hence he concludes that one use of the thymus is to secrete from the blood a fluid containing numberless central particles, similar to, and indeed identical with, those found in the juice of the lymphatic glands; that the lymphatic vessels arising from the thymus convey its fluid into the blood-vessels, and so become the excretory ducts of the gland; and that the use of the thymus is similar to that of the lymphatic glands, to which it may be considered as an appendage.

This doctrine he further supports from the fact that the thymus is largest during those early periods of life when these central particles are most wanted for sanguification; truly representing how the thymus is larger during the early time of growth in the animal, to act as an auxiliary to the lymphatic system, for the purpose of forming more of the central particles than could have been made by the lymphatic glands alone during the very period when nature most wants blood for nutrition, and so forth. For if there were no thymus in the young animal, the lymphatic vessels and glands must have been made much larger than they now are, or out of proportion to the other parts of the body; otherwise, the animal could not have been duly nourished, and the processes of nature must have been defeated. But by the assistance of the thymus, central particles in sufficient quantity are formed to be converted into blood-corpuscles necessary for the growth of the animal, and nature at the same time preserves a just proportion in the lymphatic system; and then as the animal becomes larger, and consequently the proper or special lymphatic system more extended, that alone and unassisted may furnish enough of those particles for the growth, or other wants of the animal, and the thymus being no longer necessary disappears. Hence he repeats the conviction that the thymus is an appendage to the lymphatic glands, for more perfectly and expeditiously forming the central particles for the blood in the fœtus and early time of life after birth; and it should not be forgotten that he had before declared, from the results of his experiments and observations, that the thymus is necessary to perform an office in the fœtus-state, and in connection with respiration during early life afterwards (263).

While the absolute indentity of the central particles of the thymus-fluid, and of those of the juice of the lymphatic glands and their efferent vessels is always insisted on, he observes that if we open one of these vessels after it has emerged or is at some distance from the gland, besides a great number of these particles we find also some red corpuscles (276). Thus, after proving that the central particles are chiefly formed in the gland, he conjectures that the red or vesicular portion of the blood-corpuscle can be acquired either as a secretion from the internal coat of the lymphatic vessel, or that this vessel has a plastic power over its contained fluid, so as not only to form the outer part of the blood corpuscle, but also to give it its red colour, for convinced he was that this red corpuscle may be completely formed in the efferent lymphatic vessels, independently of the glands. But, should it be objected that, if the special office of the lymphatic glands be to form the central particles, how are these particles formed when the lymphatic glands are wanting, and yet the red corpuscles perfect? The answer is, that though some animals, as the Amphibia, have not that circumscribed form of lymphatic gland which is found in the higher classes, yet those Amphibia have networks or plexuses of lymphatic vessels to supply the place of glands, and in short that the glands are but appendages to the lymphatic vessels (278); and it will be recollected that he particularly observed how the distribution of the blood-vessels on the lymphatics is such that these last also may have the requisites of a gland.

The same kind of inquiry which had so well and truly elucidated the use of the lymphatic vessels, the lymphatic glands, and the thymus, was extended to the spleen; and this organ he also includes among the adjuncts of the lymphatic system, as he expressly declares that by this system and its appendages he means the lymphatic vessels, the lymphatic glands, the thymus, and the spleen. Ligatures were frequently put on the splenic vessels of dogs and of oxen, when the lymphatics, which had of course been included in the ligature, were soon afterwards found to be turgid with a ruddy fluid, which was spontaneously coagulable, and owed its colour to an admixture of red corpuscles of blood. These lymphatics, in like manner, he regarded as the excretory ducts of the spleen; and as to the objection that might be raised to the application of this term duct to lymphatic vessels, adds that, if we consider the office of a duct, we shall find that there is no more impropriety in calling these ducts than there is in using the term duct to express that tube which conveys the fluid secreted by any other gland to its destination. Yet we must bear in mind that the lymphatic vessels might have some of the requisites of a gland, and so were considered by him as something more than mere ducts. The excretory duct of the liver conveys the bile into the duodenum, because that fluid is required in the intestines for the purposes of the economy. So the lymphatic vessels of the spleen convey the red particles of the blood to the thoracic duct, whence they pass into the blood-vessels, which is the place assigned to them by nature, and thus they are then conveyed to the different parts of the body to answer the purposes of nutrition and vivification or respiration (282).

Though he concludes that he has clearly proved the accuracy of his doctrine concerning the office of the thymus and lymphatic glands, he admits that the manner in which the red part of the blood-corpuscle is formed may be open to dispute (286), remarking that it may reasonably be asked how the blood is completed when the spleen is taken out, if the spleen is the viscus intended by nature to form the red part of the blood? He had himself extirpated the spleen of a dog, and found that the animal did well without it for a year and a half. And to this objection he replies that it will militate equally strong against any other use the spleen is supposed to have; for that the spleen may be taken out, and the animal suffer but little inconvenience from its loss, by no means shows the spleen to be useless, but only proves that some other part is capable of performing its office (284). If then the spleen be removed, or its use obstructed by disease, nature has a resource in exciting the lymphatic vessels to form a larger number of red corpuscles than usual, and these in proportion to the exigencies of the occasion; but here nature does not assign a new office to the lymphatic vessels, but only excites them to exert in a higher degree a power of which they were before possessed, which is comparable to what we observe in other circumstances of the animal economy (285).

Well might Falconar remark, in reference to Hewson's inquiries concerning the red corpuscles and the office of the lymphatic glands, "A system so new and so different as this from the opinions at present so generally entertained of the blood, perhaps may meet with much opposition, and as no doctrine should be admitted in philosophy till it has stood the test of the most careful and accurate examination, it may be some time before this is universally allowed; for as the experiments are numerous, and some of them not easily made, few but lovers of science will take the necessary pains to inquire into them; but we will be bold to assert, that whoever repeats these experiments will be amply rewarded for his trouble. We shall add, that when these facts are viewed with candour, and experiments of this kind are prosecuted with industry, they may probably direct the way to discover many operations of the animal economy that are at present considered among the inexplicable arcana of nature." Surely this is a remarkable passage in the physiological history of 1777, a prophetic but ineffectual light in a surrounding darkness, and by a mere youth, for he died at the age of twenty-four.

Here, then, we find Hewson concluding that he had clearly proved the use of the lymphatic glands and thymus; and Falconar, after repeating the experiments which led to that conclusion, not only endorsing it, but truly predicting that it might be some time before the accuracy thereof would be universally allowed, and that whoever might continue the inquiry would be amply rewarded for his trouble. Let us therefore survey this subject by the light of recent researches,—premising that, when Hewson undertook and concluded it, nothing whatever had been done to the same or a like effect in this important branch of physiology, which, indeed, he found utterly barren, uncultivated, or fruitless,—and we shall soon perceive that his observations, experiments, and results were, for the most part, so completely new, and, above all, true, as to entitle him to the full merit of discovery without dispute, notwithstanding the surreptitious attempts which have been made to deprive him of it; and that such a masterly exposition of the phenomena with the imperfect instruments at his command, the best of which was a simple lens of $\frac{1}{23}$rd of an inch focal length, and amid the prevailing darkness in which this valuable department of knowledge was then hid, must be considered as one of the most surprising achievements of physiological science. And, as we have already shown, not by one of those happy fortuitous chances by which some as great or greater discoveries have been suddenly made, but as a logical sequence of an extended series of experiments and observations, clearly and wisely devised, and patiently and skilfully executed, during the course of several years of his too short life; so that, considering also his labours concerning the mature red corpuscles, to him we must award the palm as the most illustrious founder of modern histological science in regard to the blood.

Repetition and Elucidation of Hewson's Experiments.—But, as we have seen, all his merits in relation to the office of the lymphatic glands lay dead and despised for upwards of half a century, and I know not that his experiments were ever even repeated during that time, except immediately after his death by Falconar. About a quarter of a century since I undertook the task, and a labour of love it proved.

Distribution of Lymph-Corpuscles.—Accordingly, the juice of the lymphatic glands was found to be so thickly pervaded by the common lymph-corpuscles, that its whitish-brown tint and semi-opacity are entirely due to them; for, however numerous these corpuscles may be, they never give to the juice of the lymphatic gland that dead-white or milky colour which is produced in the chyle by its characteristic molecular base. These lymph-corpuscles are far more numerous in the glands than in any other part of the lymphatic system. The opinion, therefore, so generally entertained, that the lymph-corpuscles are most abundant in the efferent lymphatic vessels is simply an error, which an appeal to careful observation will always be sufficient to correct. The corpuscles exist also in the inferent lymphatics, though sometimes so scantily that you cannot detect them without diligent search, and often not at all; while in the efferent lymphatics the corpuscles are more numerous, but regularly less so than in the glands. During the height of digestion, as will be more particularly shown in another Lecture, the characteristic and chief constituent of the milky fluid in the mesenteric glands and throughout the entire lacteal system, is the molecular base of the chyle, though these glands are richer in chyle-corpuscles than the chyle from any other part of that system. But, after fasting, the molecular base entirely disappears, and the number of corpuscles, though still considerable, is much diminished, and the juice of the mesenteric glands becomes similar to that of the common lymphatic glands. Thus, if you keep a young puppy or kitten without food for more than a day, it will be difficult or impossible to find any difference between the contents of these glands and vessels of the lacteal system and the contents of the lymphatic system. The most remarkable phenomenon will be a very slight redness in the fluid of the efferent vessels both of the mesenteric and other lymphatic glands.

FIG. 17.

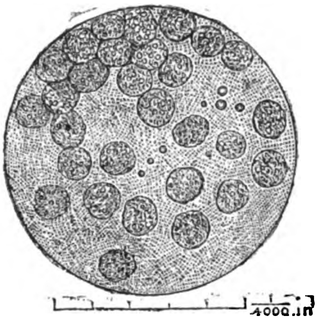

FIG. 17.—Corpuscles in the juice of a lymphatic gland, and a few secondary molecules. The base is a structureless and very minutely granular matter. (From the neck of a healthy child, aged 3, accidentally killed.)

Red Corpuscles in Lymph.—And this tint is owing to red corpuscles, regularly somewhat smaller and less uniform in shape than the common ones of the blood, and as regularly occurring in the thoracic duct and lymphatics of the spleen of the horse and ox, especially after fasting. But in the same vessels, as well as in the efferent lymphatics generally of carnivora, the red corpuscles are either very few or not to be discovered at all, except after prolonged absence from food, when the lymph may even become somewhat ruddy from the increase in it of red corpuscles, and they are always present then in more or less abundance. Whether the occurrence of these red corpuscles in the lymph be accidental and extraneous, as Mr. Lane concludes, or be due to a formation of them where they are found, and by a conversion of lymph-corpuscles, as Hewson believed, has never been clearly and peremptorily decided. Many facts observed in the course of these experiments incline me, without pretending to be able to settle the question, to the opinion that the red corpuscles found in the ruddy fluid of the thoracic duct and lymphatic vessels are inherent, and not incidental or foreign constituents. If these red corpuscles, as is commonly believed, are merely extravasations, wanderers from the blood-vessels into the lymphatics, how comes it that such corpuscles are regularly found so much more abundantly in ill-fed and fasting animals? We know that animals in such circumstances, not having the regular supply of chyle, must have an extraordinary demand for the constituents of the blood from any other source; and accordingly an unusual effort may be made by the lymphatic system, and especially in young animals by the thymus. Indeed, the shrinking of this last gland from expenditure of its juice in young animals during temporary hardship and fasting is very remarkable, as will be more particularly described in the next Lecture.

I have often compared the red corpuscles from the chyle or lymph of the thoracic duct of the horse with the red corpuscles from the blood of the same animal's heart, arteries, and veins; and a difference either of size or form, and often of both, between the corpuscles from the lymphatic system and those from the blood-vessels was constant and well-marked. Thus, the perfectly coloured corpuscles from the lymphatic vessels of the spleen and thoracic duct were found to have an average diameter of $\frac{1}{3800}$th of an inch, while the red corpuscles from the blood-vessels gave an average measurement of $\frac{1}{4700}$ th of an inch; and in the dog the mean size of the red corpuscles from the lacteals was $\frac{1}{3383}$rd, and of the red corpuscles from the blood-vessels $\frac{1}{3672}$nd of an inch. In the human subject the measurement of the red corpuscles from the thoracic duct was $\frac{1}{4670}$th, and red corpuscles from the blood-vessels $\frac{1}{3200}$th of an inch. A difference of form is often equally plain; for while the indented and granulated corpuscles, frequently with molecules at their edges, only occur in a small minority of the red corpuscles of the blood, these forms constitute the majority of the red corpuscles of the chyle or lymph. And many trials proved that the red corpuscles of the blood when added to chyle preserve their regular shape, so that the mixture of a few red corpuscles from the blood-vessels with the chyle of the same animal under examination is a good way of observing the difference in question. Moreover, however numerous the red corpuscles may be in the lymph, they seldom run together into rolls as those of blood do, not even when the lymph is artificially thickened, neither have these red corpuscles of lymph or chyle the remarkable plasticity of those of blood, nor yet acquired the curious property of becoming more viscid with the increased viscidity of their surrounding medium possessed by those of blood. These are some of the facts which will have to be explained away before it can be unconditionally admitted that the red corpuscles in the lymph or chyle are mere extravasations from the proper blood-vessels. The source of error to be specially guarded against in such observations is the well-known disposition of the red corpuscles of blood to shrink or become otherwise altered in size and shape, from diosmotic action, as more particularly explained in a former lecture (*Medical Times and Gazette*, August 16, 1862); and which, I believe, was not the cause of the differences observed in the comparative trials just detailed.

The Army Medical Service in New Zealand.—Lieutenant-General Cameron in his last despatch of July 20 thus bears testimony to the intrepidity and skill of Surgeon-Major Carte, of the second Battalion of the 14th Regiment, during the late action with the natives on the Waikato. He writes:—"Surgeon-Major Carte, M.B., second Battalion, 14th, the senior Medical officer in the field, rendered prompt assistance to the wounded, many of whom he attended under fire." While such services are required from, and performed by, members of our Profession, it is not merely ungenerous on the part of the War Office authorities, it is in the highest degree unjust that the Medical officers should be placed any whit below combatant officers in the matter of military rank and honours. Surgeon-Major Carte's conduct in the field was as much military service, and deserves as much to be recognised as military service as does that of the gallant General Cameron himself.

ORIGINAL COMMUNICATIONS.

◆

THREE CASES OF CONJUNCTIVITIS, WITH FIBRINOUS DEPOSITS ON THE LIDS OF BOTH EYES.

By EDWARD CHARLES HULME, F.R.C.S.,
Surgeon to the Central London Ophthalmic Hospital, and to the Great Northern Hospital.

Case 1.—W. J., a healthy-looking child, aged three weeks, was brought to the Central London Ophthalmic Hospital in the month of December, 1859. The case was registered on the Hospital books as one of purulent ophthalmia, and the usual remedies for this affection were prescribed. Towards the end of January, 1860, the child came under my observation with enormously swollen, tense, and shining eyelids of both eyes, the upper lids especially being considerably protruded from the eyeball; there was no purulent discharge, merely a thin, watery fluid, evidently a hyper-secretion of the tears which could not be carried off by the everted puncta, mixed with the secretions from the lids themselves, and with small flakes of lymph. The pain which the child suffered on having the parts touched, induced me to forbear making any examination of the state of the corneæ, which I expected I should have found sloughed. No alteration from this state taking place after a few days, I put the child under chloroform, and then was enabled to make a good examination of both eyes. The corneæ of both eyes were perfectly clear, the ocular conjunctivæ but moderately injected with a few large, dilated vessels, and slightly chemosed with fluid underneath; no lymph deposit on their surfaces. A very different state of things appeared on the palpebral conjunctivæ, the upper and lower lids of both eyes being covered with a thick, firm, whitish, fibrinous deposit, which gradually got thinner at the conjunctival reflection over the eyeball, but which at the palpebral edge showed its thickness by a red line of demarcation; it was especially dense—as thick as fine chamois leather—where it lined the tarsal cartilages.

On inquiry into the history of the case, I found that the complaint commenced when the child was a week old, that at that time the child had the thrush for three or four days, but slightly. The child never had any profuse white or yellow discharge from the eyes. As far as the parents can speak, there was no scarlet fever about at the time of its birth. The child has never had any eruption. No venereal history is acknowledged by the parents, or had the mother any excessive leucorrhœal discharge.

Although, to all external appearance, a well-nourished child, fat, but somewhat flabby, a good deal of constitutional irritation was manifested; it was fretful, restless, and more or less feverish, with disordered secretions, etc. The application of cold, continuously applied to the lids, was ordered; chlorate of potass. to the child, and iron tonics to the mother, who was but weakly, and half fed. Cold afforded relief to the child, but no effect on the state of the lids was observed. I then lost sight of the child for near six weeks, during which time, however, astringent lotions had been applied to the eye, and the mother had persevered in tonics.

In March, 1860, the child came under my care again, and in no respect had it improved or retrograded. Under these circumstances, with the assistance of my colleague, Mr. Taylor, I administered chloroform, and removed the deposit from both lids of the right eye, which was rather the worse of the two; that on the upper lid I was but imperfectly able to remove, on account of its close adherence to the mucous membrane, but that on the lower lid came off completely in one piece, retaining the shape of the lower tarsal cartilage, and showing a tendency to curl up; the mucous membrane bled very freely, and when the blood was fairly sponged away, the solid nitrate of silver was applied. On examination under the microscope immediately after removal, it was found to be somewhat fibrinous in structure, with faintly-marked longitudinal striæ, and with numerous interspersed cells, showing one, two, or more nuclei on the addition of acetic acid. On the third day after the application of the caustic the deposit was seen to have been renewed as extensively as ever. The caustic treatment was repeated—in all, four applications to the right eye, and three to the left—at intervals of from three to seven days, the child being always under chloroform. I may here add that I could not get the mother's consent to have the nitrate of silver applied at shorter intervals, the child seemed to suffer so much from its application for hours after the effect of the chloroform had passed off. The deposit on the lower lid always peeled off readily, but that on the upper lid was only partially and with difficulty removed. No benefit ensued from this treatment; the eyelids remained in the same condition as before, the state of health of the child still evincing considerable constitutional irritability. From this time the treatment has been varied. Tincture of sesquich. iron, cod-liver oil; counter irritation to the lids; inunction of mercurial ointment; small doses of grey powder always producing vomiting; astringent and stimulating lotions to the eye; tonics, and a full, nutritious diet being enforced on the mother and child. The latter, however, did not take nourishment well, although it did not lose its fat appearance. All these means were regularly and systematically persevered in, but, for some time, no impression whatever seemed to have been made on the disease. During the month of August an opacity appeared in the centre of the cornea of the right eye, and was disposed to extend. Liq. cinchonæ in milk was ordered; the child was taken for a fortnight into the country, and the opacity gradually disappeared. In October the child commenced cutting its teeth; from that time to March, 1861, cod-liver oil and mild astringents to the eye, with continual attention on the part of the mother to wipe away the secretions with the corner of a damp sponge, were the only means adopted, and under this simple general treatment the reparative powers had so far got the better of the morbid action, that the fibrinous deposit was gradually shed, a looser and more fluid secretion taking its place, the mucous membrane being seen through it in patches; the upper lids, though still slightly everted from the globe, had almost regained their normal condition, as far as their external appearance was concerned. The corneæ were clear, with the exception of a slight haziness marking the site of the old opacity; the ocular conjunctivæ show a few larger dilated vessels than ordinary; vision is unimpaired; the child, however, has a slight internal squint with the right eye.

Case 2.—Arthur E., a child of 15 months old, was sent to me by my friend Mr. Sawyer, of Finchley, on May 19, 1862. The history of this case was that there had been no purulent discharge for the first six weeks after birth; that about the seventh week the lids began to inflame, swell up, and a mixed discharge of a watery and purulent nature made its appearance. Caustics were applied regularly two or three times a week for three months, but without effect. When one year old the child had an abscess of the lachrymal sac of the left eye, which was opened, and a fistulous opening is now the result.

On application at the Hospital, the state of the lids of both eyes were, although in a milder form, exactly corresponding to those in the above case; fibrinous deposits on both lids of both eyes, with a watery discharge mixed with flakes of lymph. Tonics and mild astringents were prescribed.

In August, 1863, the child came again under my observation, and on everting the upper lid of the right eye, the fibrinous deposit was observed to be attached by a pedicle at the reflexion of the ocular and palpebral conjunctiva, appearing over the upper part of the cornea, like a polypoid growth, projecting the upper lid forwards, and being somewhat modelled by the movements of the lid on the globe. It has, as the mother said, frequently dropped off, but always had re-formed; the pedicle, in fact, had become organised. The corneæ of both eyes were clear; the palpebral conjunctivæ red and velvety, with a slight muco-purulent discharge.

Case 3.—Elizabeth E., infant sister of the above A. E., was brought to the Hospital when five weeks old. Ten days after birth a discharge, and a swollen, inflamed state of the lids were observed. As in the two former cases, the lids of both eyes were covered with the fibrinous deposit.

On October 9, 1863, the child being near 4 months old, I, with Mr. Sawyer, examined the eyes under chloroform. The cornea of the right eye was opaque. I removed the deposit, applied nitrate of silver freely to the surface of the lids. A week after the whole deposit had re-formed as bad as ever. This case still remains under treatment.

Pseudo-membranous deposits upon the conjunctiva are occasionally, but rarely met with in ophthalmic practice in this country, and but slight notice is taken of this class of disease by our systematic writers on ophthalmic Medicine. Mr. Wharton Jones refers to the subject, and Dr. Mackenzie (*Brit. Med. Journ.*, p. 27, 1858) looks upon it "as an occasional attendant on that severe form of general inflammation of the eyeball to which the name of ophthalmitis is applied." "In no instance is the effusion of coagulable lymph on the surface of the conjunctivæ, forming a layer, which can be peeled off like a pedicle or skin, part of any mere conjunctivitis." It appears as if it were met with more among the Germans, and in the elaborate paper by Von Graefe, in the *Arch. für Ophth.*, B. 1., s. 168, etc., 1854, the difference between this form of conjunctival disease, which he considers a form of blennorrhœa neonatorum, with fibrinous deposit, and that known as diphtheritic conjunctivitis, is diagnosed with great minuteness. There are, however, other German authors of repute who prefer classifying these diseases under a separate head. Dr. Josef Pilz, in his "Lehrbuch der Augenheilkunde," p. 322, who has, with laborious minuteness, subdivided his classification of conjunctival inflammations into many forms, especially notices this type of disease by the name of "fibrinous conjunctivitis," or "conjunctivitis membranacea." He says, p. 312, *op. cit.*,—"If the coagulatory exudation is quite of a fibrinous character, with a prevailing tendency towards organisation and new formations, then we get a very rare form of conjunctival inflammation, the fibrinous conjunctivitis." Now, whether one is justified or not in separating this form of disease into a distinct class, or whether we may consider it as a fibrinous deposit merely superadded to an ordinary catarrhal inflammation, it is certainly a disease which requires careful diagnosis, inasmuch as it differs from this latter in its apparent constitutional rather than local character; in the nature of the discharge—the microscopical character of the deposit—in its more destructive tendency, and in its obstinacy to all kind of treatment. I should prefer myself looking upon it as depending upon some peculiar condition of the blood—occurring in children of low vital power—which must be remedied entirely by treatment of a tonic and generous nature before any impression can be made on it by any local remedies.

ON THE TREATMENT OF HEREDITARY SYPHILIS IN INFANTS.

By W. ALLINGHAM, F.R.C.S. (Exam.),

Surgeon to the Great Northern Hospital; Medical Tutor at St. Thomas's Hospital.

THOSE who are presumed to be authorities upon the subject of this communication so boldly assert that mercury in some form is always necessary in the treatment of constitutional syphilis in infants, and, moreover, are so well contented with the result of that treatment, that it requires some hardihood to venture to question their conclusions: if any apology be needed, I can only say that my experience of the mercurial treatment certainly differs very materially from theirs, and this first prompted me to examine the subject more carefully, and to endeavour to collect a number of cases in order to see, upon an extended scale, what was the real value of mercury as a remedy in hereditary syphilis in young children.

I found much more difficulty than I had anticipated in obtaining a large number of trustworthy reported cases, and after much research I only succeeded in collecting ninety-five in which *mercury alone* was administered. Of these ninety-five, sixty-seven were cured, and twenty-eight died. In the year 1853, when Clinical Assistant to the late Dr. Samuel Griffiths, at St. Thomas's Hospital, I took notes of seventeen cases of hereditary syphilis in infants treated by him with hydrarg. c. cretâ. Of these nine were cured, and four died; the result as to the remaining four was unknown. During the years 1856 and '57, I myself treated with various forms of mercury ten children, with a result of seven cures and three deaths.

The sum of all this is, that out of 118 cases treated solely with mercury, 35 died, or rather more than 29 per cent. On a closer examination of these statistics, two other important facts came to light, viz., that the majority of those children which recovered were over four months old when specific treatment was commenced, and that more than half of the deaths occurred before the age of four months; so that clearly those that recovered had already tided over a very dangerous period of their existence without any treatment whatever. The above results were to my mind by no means confirmatory of the efficacy of mercury, and fortified the impression I had long entertained, that mercury was by no means the *specific* for syphilis which its advocates would have us believe. I do not wish to assert that mercury is of no service whatever in the treatment of some forms of syphilis, but I wish strongly to express the opinion that it does not act in any *specific* way, and that it is positively most injurious to infants.

There is good reason to believe that mercury acts principally as a disintegrator or destroyer of the blood, that in consequence it induces wasting of the tissues, and an increased action in the various glandular systems to get rid of the degenerated structures, and probably also for the elimination of the drug itself. Now, unless one believes in the specific or antidotal action of mercury in syphilis, most assuredly this is not the remedy required in children; for the subjects of hereditary syphilis are frequently ill-nourished and cachectic; they suffer from low forms of ulceration, and their powers generally are immensely below those of healthy children.

Looking at the question from this point of view, it has appeared to me that it was quite possible mercury might be beneficial in the constitutional syphilis of adults, and very inadmissible in infants; for it may be advisable under some circumstances to induce a breaking-down of the blood and tissues in order to eliminate with greater rapidity than the normal changes would effect, a poison which was contaminating the whole system. We very well know that up to a certain extent, the greater the amount of molecular destruction of the tissues the more rapid is the process of repair; but if we reflect for a moment upon the natural activity of the circulation in young children, and the truly wonderful facility with which the transformation of their tissues takes place, I think we must see that no adventitious aid to elimination is required, and I would venture to suggest that it is more reasonable to endeavour to sustain and promote the general powers, and improve the condition of the blood; trusting to Nature to remove the morbific material.

In short, I believe the principal object of treatment should be to renovate the health rather than to eliminate the poison; acting upon this view I have prescribed the chlorate of potash, as being, perhaps, some approach to the remedy required.

I will now briefly relate the history of fifteen cases treated by me at the Farringdon Dispensary and the Great Northern Hospital. Most of them were seen by one or other of my colleagues, and vouched for as being undoubted hereditary syphilis. To save unnecessary repetition, I may state that the main treatment in all the cases was to administer four times in the day one or two teaspoonfuls of a saturated solution of chlorate of potash in water, three to five minims of dilute muriatic acid being added to each dose of the solution. All the children were ordered to be sponged twice daily with warm water and soap, and to wear flannel next the skin. The mothers, when the children were suckling, were also ordered an ounce thrice daily of the chlorate of potash solution, and advised to live as well and as regularly as they could. The local applications consisted of zinc ointment and dusting the parts with oxide of zinc. On one or two occasions black wash was used to the sores.

Case 1.—Clara C., aged 6 weeks, sixth child. Admitted April 2, 1862. A very small, cachectic-looking child; severe syphilitic eruption; cracks and mucous sores around genitals; very ill-developed nails; it is supposed to have been born quite a month before its time; the rash appeared about a week after its birth.

The mother has a syphilitic eruption. Denies all knowledge of primary symptoms. She has had several miscarriages. The husband is said to be healthy. The child soon improved, and was discharged well on May 5.

Case 2.—James B., aged 10 weeks; third child. Admitted April 11, 1862. Well-marked syphilitic rash, redness, and peeling off of the skin of genitals, sore throat, and ulcers in mouth; was born with snuffles. When the rash first made its appearance is not accurately remembered by the mother. This child is sucking, and does not look at all unhealthy. The mother has no rash apparent. Had a bad discharge whilst pregnant. Nipples healthy.

April 18.—I saw the father of the above child. He has psoriasis palmaris, partial baldness, and occasional sore throat Has had the eruption two years at least. He was treated for a clap about two years ago. Never had any sores. The child got well in forty-four days.

Case 3.—James B., aged 12 months. Admitted May 3, 1862. On the day before admission the mother found the child's leg swollen, and took it to St. Bartholomew's Hospital, thinking it had received an injury. It had been suffering from blotches for some time. No injury was discovered. The next day the child was worse. It was brought to the Dispensary, and was seen by my colleague, Dr. Charles Drysdale, who kindly asked my opinion of the case, and transferred him to me.

On examination, we found an abundant and well-marked syphilitic eruption, accompanied by tegumentary thickening. There were enlarged cervical and sub-occipital glands, and there was general œdema of the left leg, which appeared to be very painful; the child looked exceedingly ill. Ordered the usual mixture, with the addition of ten minims of the compound tincture of cinchona.

May 5.—Child worse. The other leg has enlarged, and is hot and painful; there are two ragged ulcers in the throat, and an ulcer on the left side of the tongue; he is perpetually moaning, does not sleep, and scarcely takes any nourishment. Ordered gtt. j. tinct. opii. to be added to each dose of the medicine. To have beef-tea and port wine.

7th.—No improvement, except that the leg first affected is evidently less painful; an arm has suddenly swollen; eruption the same; throat sloughy and stinking. We entertain no hopes of the child's recovering.

9th.—Slight improvement, having slept better. To paint the outside of the throat with tinct. iod. co.

12th.—Both arms now swollen; legs better; there has been no redness of the limbs; they were in fact waxy-looking, and œdematous, and there was no increase of pain on pressure over the joints. He has taken more food and wine.

14th.—Much better; throat cleaning; limbs less swollen; takes food fairly, and sleeps comfortably.

16th.—Still improving; blotches fading. Leave off the tinct. opii.

19th.—Nearly all the spots gone; the throat looks nearly well; sore on tongue healed.

26th.—Blotches all gone, as also is the swelling of the limbs. The child is now lively, takes its food almost ravenously, and sleeps well. Ordered quinine gr. j. ter die, and ol. jecorio aselli ʒj. ter die.

I have seen the mother several times since, and she says the child has continued in excellent health.

The history of the mother is only suspicious; she suffered much from discharge during her pregnancy, and has had several miscarriages. The child was born at seven months; looked old, and snuffled; when three weeks old had a bad sore throat. History of father not known.

Case 4.—Mary Anne G., aged 9 months, first child. Syphilitic spots and sores on genitals; has had the rash for some months. She is a very feeble child, always fretting; brought up principally by hand.

The mother has a rupeal eruption, and has suffered much from privation. She was delivered in a workhouse. No history of the father. The child got well in forty-two days, the mother in forty-four.

Case 5.—Wm. H., aged 3 months, first child, admitted July 28. Syphilitic rash and mucous sores around anus; an ulcer on the mucous surface of lower lip. He has been delicate from birth. The mother has suspicious-looking cracks on both nipples, with enlarged axillary glands on one side. She has no eruption. Father said to have suffered from some genital affection. Not known what. The child was cured in forty-two days. No rash was developed on the mother. The nipples healed after some time by applying a solution of nitrate of silver.

Case 6.—Jas. B. was brought to me when only two weeks old. A small wizen-looking child covered with rash; has peeling off of skin and cracks around anus. There is a muco-purulent discharge from the nose, and he has a hoarse cry. I went to see the mother, living in Plough-court, Fetter-lane; she has abundant rupia and impending mammary abscess; seems awfully out of health. She had sores and discharge during her pregnancy, and was treated at St. Bartholomew's. Had her mouth made sore. Ordered the mother the usual solution with decoctum cinchonæ. The child was nearly well in twenty-nine days, and the mother much improved. I then lost sight of them, owing to their moving away.

Case 7.—Mary E., aged 5 months. Third child. Admitted August 29. Born with snuffles; is an old-looking child. She has plentiful syphilitic rash and sores on genitals. The mother had syphilis about eighteen months ago, and was treated at the Royal Free Hospital. She believes she took mercury. There is no evidence of syphilis in her now.

This was an obstinate case, taking sixty-five days for its cure.

Case 8.—Mary C., aged 7 months. Sixth child. Admitted November 7. Was born with snuffles and rash; took grey powders for some three or four weeks. (This was administered by the Medical man who attended the mother.) The child got better under this treatment, then had a relapse, and recovered without any treatment. Now looks by no means unhealthy, and is quite plump. There is abundant syphilitic rash, slightly papular and cuprous, with much staining of the skin; no condylomata. The mother had rash and sore throat a long time ago; lost her last child when it was six weeks old; the Medical man who attended gave her to understand through her own or her husband's fault. She now has no indication of syphilis. Her husband is a seafaring man.

This child took the chlorate of potash mixture for two months without any appreciable advantage. I then changed the treatment to pot. iodidi, gr. j.; liq. hydr. bichlor., ♏. v., ex decoctum cinchonæ. I also ordered the child to be weaned.

Under this treatment all the rash was gone in six weeks. I think this a very interesting case.

Case 9.—Wm. McG., aged 2 months. Third child. Admitted November 21. Has rash and mucous tubercles; not so very unhealthy in appearance. A previous child was affected in the same way, and died when three months old. The mother has no appearance of syphilis now, but she has had rash and sore throat. No knowledge of a primary sore. The child got well in thirty-two days.

Case 10.—Henry B., aged 18 months, sixth child, admitted January 2, 1863. Presents a syphilitic eruption in part pustular, and with an approach to squamæ on the soles of the feet and hands, and mucous patches on the inside of cheeks, condylomata at anus, hoarse voice, and ringing cough. Mother suffering from laryngeal disease; alopecia and nodes on tibiæ and clavicles; she has suffered in this way for some years; been more than once in Hospitals; and has been twice salivated. Has had three still-born children, and several miscarriages; she has only one child alive besides the present patient; she did not suckle the child long, having very little milk. The child took the chlorate of potash mixture for five weeks without very marked benefit; I then added potassæ iodidi, gr. ij., to each dose, and a more rapid improvement took place. Discharged cured on March 18.

Case 11.—James B., aged 6 weeks, first child, admitted February 16. Cachectic look; hoarse cry; rash and mucous tubercles around anus, and sores on buttocks; he is being brought up by hand. The mother said to be a prostitute. Cured in fifty days. The rapid improvement in this child was most marked.

Case 12.—Sarah M., aged 5 weeks, admitted March 30, fairly healthy in appearance; has sores in mouth, and syphilitic rash. The mother has mucous sores on the left nipple; she knew her husband had been ill with the bad disorder whilst she was pregnant with the present child; she herself had sores, for which she took pills. The child seemed to improve up to the third week, and then relapsed. The rash became more profuse, and the mouth so sore that it almost refused the breast. In the fifth week it was much worse; diarrhœa came on, and it rapidly emaciated. The abdomen became hard, and there was frequent hacking cough. The child died on the thirty-eighth day from the commencement of the treatment.

Case 13.—Daniel B., aged 4 weeks, third child, admitted May 25; snuffles and roseolous rash; doubtful syphilitic appearance as to the child, but the mother has squamous and cuprous eruption, from which she has suffered for some time. No history of primary syphilis. Has had two miscarriages. Husband said to be healthy. The child was well in twenty-six days; the mother was very much better, but I lost sight of her before all the eruption had left her.

Case 14.—Julia S., aged 3 weeks, second child, brought to me at the Great Northern Hospital, June 4. She is profusely covered with syphilitic blotches, and has mucous sores on buttocks. The child does not look unhealthy.

18th.—Saw the mother; she has rash and mucous sores on labia. She had a sore whilst pregnant with this child, and took mercury for its cure.

July 20.—Child quite well, mother much better.

Case 15.—Jessie B., aged 5 months, fifth child, seen at the Great Northern June 22. Three weeks after birth was covered with spots; had snuffles and hoarse cry; has now blotches and sores around anus. She is very small and cachectic. The mother has rupial eruption, sore throat, and condylomata; has been affected on and off for the last three years; been treated at several Hospitals, and put under the influence of mercury more than once. The husband is said to be a dissipated man.

August 6.—The child has been quite well for the last two weeks; the mother has lost all her eruption, but continues in feeble health.

Without wishing to place much stress upon the result of my treatment of the fifteen cases detailed, I think it cannot be denied that they show at all events that hereditary syphilis in young children may be cured without using mercury in any form. Many of the cases were extremely severe, and yet only one died.

I have not the slightest intention of advocating any particular treatment to the exclusion of all other modes. I have now several cases under my care, I shall continue to extend my observations, and trust at some future period to again bring the subject before the attention of my Professional brethren, in the meantime I leave my facts for their kind consideration.

Finsbury-square.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

◆

BIRMINGHAM GENERAL HOSPITAL.

CASES ILLUSTRATING THE INFLUENCE OF EXHAUSTION OF THE SPINAL CORD IN INDUCING PARAPLEGIA.

[Communicated by Dr. Russell, Physician to the Hospital.]

In the phenomena of syncope as they are ordinarily manifested, the functions of the cerebrum are suddenly suspended; where the syncope is complete, the suspension of these functions is also complete. But although the functions of the cerebrum are those which are primarily and chiefly affected in syncope, the medulla oblongata and spinal cord also participate to a degree which differs in different cases, the difference depending upon the degree of intensity with which the cause producing the syncope operates. The cord ministers to the cerebral functions of sensation and voluntary motion, by conducting the motor impulse from the brain, and the sensitive impression to the brain, and both these functions are of course in abeyance with the suspension of cerebral power. But even in moderate syncope it is very apparent that the special and peculiar functions of the medulla and cord are implicated, whilst in severe cases it is mainly by the larger participation of the organs just mentioned in the disorder that the danger is increased; and to the same cause death, when it occurs, is to be ascribed.

In syncope produced by loss of blood, for example, the functions of every organ in the body suffer from want of their natural stimulus, and from suspension of the nutritive processes; the lowered force of the heart, the diminished temperature of the body, and the feebleness of the voluntary muscles, must be, in part, attributed to the withdrawal of blood from the capillaries of the system; but other symptoms, which are also very prominent, belong strictly to the medulla oblongata and cord. The panting breathing of the milder form of syncope, and the deep, laboured, and, in extreme cases, diaphragmatic respiration of the severe forms, are related immediately to disorder of the medulla oblongata; whilst the repugnance to food in the slighter, the nausea and vomiting in the extreme cases, and, worst of all, the relaxation of the sphincters, point also to serious derangements in the functions of the cord.

When death happens, we are able to trace gradual failure in the functions of the medulla oblongata, until they finally cease to be performed, and the respiratory movements sometimes come to a stand, even whilst the heart still continues to pulsate; to use the old-fashioned phrase, death appears to begin at the lungs, but the commencement of the process has, in reality, a more remote seat, viz., in the medulla oblongata.

Analogous to the breathing in syncope, and attributable to a like cause, is the peculiar form of breathing, often spoken of as cerebral respiration, which is met with in connexion with such diseases of the brain as have a tendency to depress the energy of that organ, either through disorganisation, exhaustion, or stupefaction by poisons. Like the breathing of syncope, it depends upon imperfect performance of the functions of the medulla oblongata; the respirations are interrupted by pauses, during which breathing by the external muscles, at least, is quite suspended; the medulla oblongata is no longer capable of carrying on its work uninterruptedly, but requires the reinforcement of frequent rest. In a little boy whom I saw with Mr. Kimbell, of Knowle, near this town, affected with general inflammation of the brain of a most acute and disorganising character, the pauses in respiration, for some time before death, amounted to forty or fifty seconds, the face becoming perfectly livid during the intervals; at first Mr. Kimbell was able to abbreviate these pauses by a dose of brandy, until the medulla ceased to be sensible of the stimulant.

It is, however, a very striking circumstance in the phenomena of syncope that the medulla oblongata and cord are much less readily affected than the cerebrum, and usually participate to a less extent. The final cause of this arrangement is obvious; were it otherwise, every attack of fainting must be in danger of proving fatal. A similar observation is made by Dr. Reid (a) in connection with the phenomena of asphyxia: "The derangement of the functions of the medulla oblongata and of the sensorial functions are not necessarily co-equal in extent, and never in importance, in asphyxia; and this is well observed in some of those cases of death from disease or from narcotic poisons where the process of asphyxia occurs more slowly and gradually. In these it is not unusual to find the sensorial functions nearly or entirely suspended at a time when the respiration is pretty effectively carried on, and it is evident from various facts that the arrestment of the muscular respiratory movements is not dependent upon the suspension of the sensorial functions, but upon arrestment of the functions of the medulla oblongata."

But although in syncope the cerebrum, medulla oblongata, and spinal cord are all of them involved, though not to an equal extent, there are cases in which a depressing influence may operate upon the cord alone, without ever travelling upwards to the brain, and produce a condition of exhaustion in the cord in which the brain either does not participate, or participates only as a secondary phenomenon, the result being a state of disorder in the cord analogous to that which is produced under like circumstances in the brain. Among such causes the most direct and powerful are those which act through the instrumentality of the functions of the cord, exhausting it by making a demand upon it for excessive functional activity; and none of these causes have greater power than immoderate sexual indulgence, more especially masturbation. In this fatal vice the venereal passion is carried at each indulgence to the state of highest tension by the aid of the mind, and on each occasion the cord is subjected to the strongest excitement which sensation and imagination in combination can produce, for we cannot regard the mere secretion of the seminal fluid as constituting the chief drain upon the energies of the cord, but rather as being the exponent of the nervous stimulation by which it has been ejaculated.

But syncope, properly so-called, by no means includes all the phenomena which result from an exhausted state of the brain; the exhausting influence may be applied in different modes, and an important difference will thus be produced in the ultimate course of the case, covering, indeed, by the various modifications induced, the whole of that wide interval which separates the syncope of an otherwise healthy person from the gradual decline of mental and physical power which attends the atrophic softening of the cerebral tissue. Taking the case of hæmorrhage, the syncope may be the result of a single copious loss of blood; or, on the other hand, it may occur only after a succession of more moderate bleedings, the final loss, which constitutes the immediate cause of the faint, being often very small. These two cases bear no proportion to each other in the importance of their results; in the former the patient, unless previously diseased or depressed, will speedily recover, and in the rare cases in which the hæmorrhage is carried to a fatal extent, the brain, and, indeed, all the solid organs, will probably not present any great deficiency of blood.(b) But, under the circumstances supposed in the second case, recovery will be a protracted process, perhaps may never occur at all, and the brain and other solid organs will be found, after death, bleached from the absence of blood.

A parallel may be shown in these respects also between the brain and the spinal cord; the former of the two class of cases just quoted is occasionally instanced by the cord when in a state of concussion, in consequence of a blow or shock inflicted upon it alone. Some interesting examples of this kind of accident are given by Mr. Bryant, in *Guy's Hospital Reports* for 1859. I subjoin a case, however, of a mixed character, in which, either from the intensity of the shock, or more probably from the accompanying injury to the cauda equina the cord was not equal to the effort of recovery, death was caused by the concussion operating through impairment of the respiratory function. But this form of exhaustion of the cord induced by a temporary cause is also illustrated by the second of the following cases, in which physical exertion or mental effort, in a subject whose cord was already weakened by venereal excitement, brought on repeatedly, a condition of the cord strikingly analogous to the phenomena of syncope on the brain, temporary in duration, and instantly relieved by the recumbent posture.

In the third case, the wretched habit of masturbation, practised with great frequency and for many years, seems to have acted upon the cord in the same manner as repeated small hæmorrhages affect the brain, slowly sapping its energies, until it succumbed soon after the last application of the exhausting influence, probably through the instrumentality of an atrophic process previously induced, as evidenced by the diseased state of the minute vessels.

The last case which I shall quote will exemplify the operation of a depressing influence upon the cord, when never carried to the extent necessary for producing a marked effect in any single instance, but nevertheless maintaining nutrition at a permanently lowered standard, until at last the tissue of the cord was irretrievably damaged, and permanent atrophy was established.

It is impossible to over-estimate the baneful influence of sexual excesses, and especially of masturbation, when present, in producing nervous disease, nor the importance of ascertaining their existence. The last-mentioned vice is doubtless at the bottom of a great variety of anomalous symptoms, which are presented to us in practice, and probably of not a few hysterical disorders in women. I would throw out the suggestion that some cases at least of what are styled hysterical paralysis are really the result of masturbation, and are produced in the manner which it has been my object to illustrate in these remarks. I insert first the following case with the object of showing what is, however, well known, viz., the surprisingly early age at which the sensibility of the sexual organs may be excited with pleasurable results.

Case 1.—Masturbation at the Age of 5½ Years.

I was consulted lately by a gentleman whose child, aged 5½ years, had contracted the habit of constantly handling his penis by day as well as by night. The effect produced upon the health of the child was most deleterious; he became delicate, irritable, and miserable; his night sleep was disturbed by incessant moaning and fidgeting, and his body was bathed in perspiration. During the day he was constantly fatigued, or wearied by slight exertion; he lost his appetite, and his health was seriously lowered. By careful watching he was induced to give up the trick altogether by day, but at night the habit was too strong for him, and he was repeatedly found asleep with the offending organ in his hand. The change in the child's health, which took place after an effective mechanical contrivance had prevented him from continuing the habit, was described by his father as being quite surprising; "he looks already broader, and ruddier, and stouter, and he is as happy and comfortable again." I gave directions for a treatment to secure the removal of ascarides from the rectum, but as the child lived at a distance, I never learnt whether any worms had been discovered, nor could I ascertain whether a vicious nursemaid had had any part in inducing the mischievous practice.

Case 2.—Sudden and Temporary Failure of Motor Power in the Lower Limbs, induced by Mental or Physical Effort, relieved instantly by the Recumbent Posture, in a Newly-married Man, previously subject to Emissions.

Robert B., aged 26. He was a man of tranquil, rather phlegmatic temperament, and good general health. He had not incurred excessive labour either of body or of mind. His habits were most regular. At the time of the illness about to be described he had been married six months.

(a) "Physiological, etc., Researches," 1848, p. 38.

(b) Marshall Hall, "Observations on Blood-letting." 1836. P. 131.

For a week or ten days before I was summoned to see him he had been away from home. During his absence he had one or two slight attacks of what he called "faintness," with momentary confusion of sight, which, however, subsided immediately. He suffered for three days after his return from symptoms of ordinary catarrh, and was remarked by his friends to be very soon tired, and to look old and out of condition. On the fourth day he endeavoured to walk to his place of business, but after having gone some distance he found his legs fail him, and he was obliged to return in a cab. Next day he attempted a short walk, but soon after starting again became disabled, "turned faint," and was compelled to get back as he could. It was soon after this latter occurrence that I saw him, not being at all aware that anything had happened to retard his recovery from his catarrh.

To my extreme surprise, the patient was led into the room where I was, supported on the arm of his brother, his lower extremities hardly able to support his body, and his feet scarcely raised from the ground in walking. His arms were quite unaffected. There was marked absence of the symptoms of ordinary fainting. His face certainly was pallid, but not extremely so, nor was it at all sunken. His hands were chilly, but his pulse was regular, of fair fulness, and the sounds of his heart were clear and distinct. Respiration was quite unaffected. He had no vertigo nor confusion of intellect. His pupils were natural, and his power of vision entire. There was no abnormity of sensation in the lower extremities, and having lain down the patient speedily regained full power over them, and was able to throw them about freely.

During the following three days he had two other attacks of like character, and threatenings of others, and it is especially to be noted that each attack was related to some nervous effort, muscular or mental. The first three, as stated, occurred during or after a walk; but in each case the patient had been engaged in mental exertion previously. Much less exertion of mind served to induce the subsequent ones—dictating a letter on one occasion, the receipt of a letter on another. He was obliged to be kept very quiet, and was entirely unequal to the least mental excitement. So long as he maintained the horizontal position his muscular power seemed perfect, but when erect the strength of his lower extremities speedily failed. The symptoms never exceeded the description already given, nor was the upper part of his body ever in the least affected. Micturition and defecation were natural throughout. The bowels were somewhat costive, but were easily moved by medicine. Between the attacks, and whilst the patient lay, there was not the smallest evidence of paralysis, but being erect he was only able to accomplish a few steps in his room, and found standing quite impracticable.

Temperature, circulation, and respiration were normal. His mind was clear, his spirits excellent, and his night's sleep perfect. His appetite also continued unimpaired. His urine was loaded with urates, at first very pale, but deepening in colour as recovery proceeded. It never presented any sediment either of phosphates or of albumen, and placed under the microscope exhibited no abnormal deposit. Repeated examination failed in discovering any fault in the spinal column, or indeed in any organ of the body.

The treatment employed was the strict maintenance of the horizontal posture, complete rest of mind, celibacy, generous diet, and tonics; as recovery took place, regulated exercise. The first decided indication of amendment was afforded by the patient standing to wash himself a fortnight after his first seizure, but it was some days longer before he was able to come down stairs, and some weeks before recovery could be regarded as secure; but for the last eighteen months he has been strong and hearty.

Now, with respect to the cause of this illness, the patient had been recently married; also he admitted emissions before marriage, and occasionally since. These are the only facts I could obtain, but the patient's manner under my inquiries left little doubt on my mind that he could have given me further information had he been so disposed; in fact, that he had masturbated. He also admitted some languor after intercourse on more than one occasion, and partially acknowledged that the connubial act had been repeated more frequently than was advisable.

Case 3.—Excessive Masturbation—Sudden Failure of the Power of the Lumbar Cord, without any attempt at Recovery—Death in Four Months—Atrophy of the Tubules—Fat in the Walls of the Minute Vessels.

John H., aged 32, single, a sawyer, admitted on Friday, February 14, 1862. His state on being admitted was as follows:—He was pallid, though in other respects he had the aspect of health. His pulse was quick, though rather feeble. There was complete paralysis of sensation and motion in both lower extremities, the anæsthesia extending over the abdomen as high as the edge of the ribs; the loss of sensation over all the parts below the limit just mentioned was complete, with the single exception to be mentioned afterwards. Reflex movements, as tested by the application of a hot body, and by tickling the sole, were annihilated in the paralysed limbs; the penis was half erected; the urine was retained; and the fæces were passed unconsciously. All parts of the body other than those already indicated were quite healthy; the movements of the arms and of the ribs were effected fully and freely; and sensibility was normal. The patient's intellect was clear; his pupils were natural; he was quite free from pain.

The account which the man gave of his illness was this:—His paralysis came on almost suddenly during the night of the Sunday preceding the Friday of his admission. At that time he believed himself in perfect health; he had been accustomed to walk six miles daily in going to and returning from work, and usually accomplished the distance in an hour and a-half. On the morning of Sunday he took a long walk, came home, and eat a hearty dinner. In the afternoon he felt some pain under the edge of the false ribs, not, however, affecting his back, for which he took an ounce of salts, which did not operate. During the night he found himself compelled to endeavour to pass water four times, each time with little success; and on each occasion he had increasing failure in the power of his lower extremities, until at last he had difficulty in returning to bed. In the morning he was nearly in the state he presented at his admission into the Hospital; his urine was retained; he had complete paraplegia, but anæsthesia was not perfect until the evening.

When questioned as to any symptoms of impaired nervous energy preceding the attack, he at first denied their presence, but afterwards he admitted that for six months he had had some "jumpings and startings" of his legs, chiefly at night, after returning from work; and that for about four months he had felt slight loss of power in his left leg, which caused him to catch his toe in walking; with this there was a little numbness. Moreover, he stated that the last two months he was compelled to aid the expulsion of urine by voluntary effort, otherwise the stream would pause or dribble. (He was found to be perfectly free from stricture.) These symptoms, however, were not sufficiently troublesome to attract his attention, or to interfere with his full activity.

An inquiry into his habits and mode of life resulted in the following particulars:—He had drank much until two months before the beginning of his illness. He had indulged in sexual intercourse for eight years, but never had any venereal affection. Twelve months ago, however, he observed a small superficial sore on the lower part of the abdomen, and a month before his present illness, feeling weak and out of spirits, and remembering this sore, he took about a dozen pills "from a young man," and salivated himself.

In addition to having intercourse with women, which, however, he states, did not occur frequently, he had been in the habit of practising masturbation for twelve or fourteen years, and to especial excess the last six years, having masturbated three or four times in a night. He had masturbated three times in the night preceding that on which he was attacked, and once on the next morning.

He was liable to be wet in his work, but had not been at work for three weeks before his illness began, on account of want of employment. He always lived well.

The patient was admitted on February 11, and died on June 29. His decline was very gradual, but was not interrupted by a single effort at repair. One curious exception to the completeness of the anæsthesia below the level of the ribs, consisted of partial sensibility of the integuments over a small space corresponding to the right trochanter, and once or twice some returning sensibility was observed for a time in the right thigh and leg.

At first the muscles of the limbs responded freely to galvanism, and both urine and fæces were expelled during the process of galvanising; but muscular irritability rapidly yielded, and even tonicity ceased to exist, no resistance remaining to passive movement of the joints.

On March 11 it was noted that involuntary movements, which had been previously observed, were performed chiefly by the right lower extremity, corresponding with the circumstance then observed, that the girth of the right calf exceeded that of the left by an inch and a-half.

The irritability of the sphincter ani was so completely extinguished, that no resistance was made to the clyster-pipe, and that liquid fæces trickled from the anus when the patient was moved. The urine was drawn off till April 13, when it ceased to collect in the bladder, and on that day was first observed to be ammoniacal when passed.

Very large sloughs formed over the sacrum and trochanter, partly in consequence of an accident, but granulated, and the main one entirely healed. During the last month of life the appetite fell off, emaciation progressed rapidly, the sloughs re-opened, and fresh ones were formed on every part subjected to the slightest pressure, even where the urinal was kept in contact with the body. No extension of the paralysis, nor of the anæsthesia manifested itself beyond the limit established on the first night.

The treatment consisted in the gradual administration of strychnine, with the employment of galvanism, care being taken not to continue its employment for a sufficiently long time on any occasion to induce fatigue. The muscles ceased to be affected by the galvanism in about three weeks; the strychnine reached the dose of one-eighth of a grain in a fortnight, and was continued at that dose for a month, when it was increased to a-quarter of a grain for four days, and then intermitted, on account of spasmodic movement excited by it, the irritability of the paralysed limbs becoming so great that spasms were produced even by raising the coverlet of the bed. Subsequently tonics, with continuance of generous diet, was all that was attempted.

Post-mortem Examination Forty-eight Hours after Death.—Emaciation not extreme; lower extremities œdematous; the sloughs were numerous, deep, and extensive. The vertebral column was perfectly healthy. A considerable flow of cerebro-spinal fluid took place on pricking the membranes in the lumbar region. The spinal arachnoid was rather stronger than usual. The cord was less vascular than usual. The spinal cord, for an inch and a-half above the lumbar enlargement, appeared to have a smaller diameter than it had higher up, and the diminution in size was rather suddenly effected; the edges of this part, when divided, were less sharp than in the other parts, and the cut surface was rather less resisting than natural, but this was only apparent by comparison with the rest of the cord. In other respects the entire cord presented to the naked eye the appearance of perfect health. When examined by the microscope, the portion of cord just alluded to was found more pulpy and yielding, when torn by the needles, than the other parts; in this respect it differed from all the rest of the cord. The tubules in this part were in an imperfect, atrophic state, their contents being more easily expelled than in other parts of the cord. Large collections of oil-globules existed in the walls of the minute vessels. The tissue in some specimens of the lumbar enlargement was also less resisting than usual. Abundance of large granule cells, with free oil-globules, existed in all parts of the cord; some specimens, however, were found free from these granules, and this state was observed to a greater extent in the lumbar enlargement than elsewhere. The brain and its appendages and arteries were quite healthy to the naked eye, excepting that the grey matter was pale; there was a considerable quantity of subarachnoid fluid on the surface, and a small quantity in the ventricles of the brain; the arachnoid was thick, and presented some streaks of opacity. The organs in the chest were healthy; the heart was decidedly small, and its tissue pale, but by the microscope was shown to be healthy. Liver pale, its cells healthy. Kidneys rather large and flabby, and their tissue very pale; their microscopic structure healthy, excepting that of cells were somewhat opaque. The bladder was considerably thickened and contracted, its mucous membrane livid. Urethra free from any contraction. The testes were smaller than usual.

In speaking to my friend Mr. George Elkington of this case, he informed me of one, very similar in its details, which had occurred to him many years ago, in the practice of the General Dispensary. The patient had been married about a month, and he confessed to Mr. Elkington that he had tried how often he could effect connexion with his wife; he accomplished the act four times in one night, and soon afterwards in the course of the day became affected with paralysis of his lower extremities, from which he never recovered. Mr. Elkington does not remember any particulars respecting the patient's previous habits.

The following case occurred in the practice of my colleague, Mr. Baker. I did not see the patient often, but am indebted to Mr. Bracey, the House-Surgeon, for completing the account of the symptoms:—

Case 4.—Concussion of the Spine Affecting Chiefly the Respiratory Movements—Injury of the Cauda Equina, with Paraplegia—Consolidation and Œdema of the Lungs.

J. R., aged 25. He was one of five men who fell from the roof of our railway station, a height of forty or fifty feet, an accident which was fatal almost immediately to the other four.

When admitted, the patient was suffering from shock, but his breathing was even then observed to be very quick and distressed; his pupils were contracted. As the circulation was restored, he was found to be perfectly paralysed, as regards voluntary and reflex movement and sensation in his lower extremities, and also in his bladder, excepting that some sensation remained in the upper and inner part of the right thigh, and in the inner side of the left leg, together with extreme hyperæsthesia in the inner side of the left thigh, yet he complained of severe pain in his legs as well as in his back. The movements of the arms and head were unaffected

I may at once state that no change occurred subsequently in any of these particulars.

He lived nearly eight days; during this period his condition was as follows:—His breathing was much distressed; he could only speak at first in short, gasping sentences, and, subsequently, he was for a time unable to sleep, except in snatches, from the attention requisite to carry on the process of respiration; his face in the early period was somewhat livid. He underwent frequent and considerable changes in the condition of his breathing, without any evident cause; sometimes he respired at the rate of 68 per minute, with a pulse varying from 112 to 120; at other times his respirations fell to 40, or below, and his pulse to 96. He was very thirsty, and begged for soda-water, but suffered great increase of dyspnœa, through the consequent distension of his stomach. The ribs moved to a very limited extent, but equally on either side; abdominal breathing was also performed very imperfectly. The respiratory sounds were feeble and coarse, and were subsequently accompanied by rhonchus and sibilus. The sounds of the heart were very feeble. The chest became abnormally resonant, and the usual cardiac dulness was obliterated.

The patient's intellect remained entire; his pupils were below medium size when turned from the light. The temperature of the body was exalted during the period of reaction, but subsequently fell to its normal standard. For the first three days the skin was bathed in perspiration. He took mild nourishment, with a moderate allowance of stimulants. His bowels were very costive; his urine for the last day or two was somewhat ammoniacal. Most unfortunately it was not examined for sugar.

Shortly before death his breathing became still more hurried, and, finally, was greatly distressed.

S. C., Spine.—The body of the last lumbar vertebra was separated from the sacrum, and the laminæ of the last dorsal and first lumbar vertebræ were driven in upon the cord. Above this point the vertebral canal was entirely uninjured. Scanty and quite superficial ecchymosis was observed upon the membrane over the root of two or three nerves on each side, about the middle of the dorsal region. No blood had been effused within the membranes in any part. Most of the nerves of the cauda equina were divided, just at their commencement, without any effusion of blood. The entire cord was uniformly soft, probably from commencing decomposition, a state which was indicated in the solid organs; not a particle of ecchymosis, nor the least sign of injury, existed in any part of the cord, with the single exception noted above, and a very careful microscopic examination resulted only in discovering perfect integrity in the tissue, excepting at the ruptured nerves, where the tissue was pulpy, and intermixed with numerous granule masses, and the minute vessels were loaded. The vessels in the rest of the cord were distinct, but were by no means filled with blood. Brain: The veins on its surface were distended with dark blood; there was a small quantity of fluid in the ventricles. The medulla oblongata was healthy, but was not examined microscopically. Chest: The lower lobe of the right lung, the upper lobe of the left, and part of its lower lobe were dense and non-crepitant; portions cut from it sank in water; the remainder of the lungs were loaded with fluid. Abdomen: Considerable ecchymosis existed around the right kidney; the bladder contained bloody ammoniacal urine, and its entire interior, excepting the trigone, was of a deep blood colour. Nothing notable was found in any other organ.

The consolidation of the lungs in the preceding case is a very interesting circumstance in connexion with the well-known tendency to that state in lungs whose innervation is deranged, whether by spinal disease, or the pressure of cancerous or aneurismal tumours upon the root of the lung. It was evident that the symptoms of concussion concerned the respiratory function mainly, and that the case proved fatal through the impairment of this function solely; the disturbed breathing was prominent among the earliest symptoms, and continued afterwards as the main affection.

Case 5.—Venereal Excesses—Slowly advancing Paraplegia—Impairment of Virile Power—Atrophy of the Testes.

Louis O., aged 33, currier. His symptoms commenced about four years ago; he first complained of a tickling sensation in the calves of his legs and between the shoulders; he felt weak, and he suffered at times from headache and vertigo; his sight also became impaired, a yellow film interposing between his eyes and any object on which he fixed them steadily, and the object frequently disappearing from his view. His memory was also somewhat impaired. At that time he was much prostrated by a severe attack of diarrhœa, brought on, he thought, in consequence of exposure to cold; this attack left behind it a very costive state of the bowels, which has continued ever since.

Afterwards he suffered from aching in his limbs and cramps in his legs, and his legs were cold at night; but at this time he was working unusually hard, and was exposed to cold and damp. Muscular power in his legs then became somewhat impaired; when he endeavoured to put one leg forward he felt as though it were tied, and his feet dragged somewhat in walking, at the same time he thought the integuments were less sensitive than usual. His costiveness continued to trouble him greatly, and at this time his power to retain his urine was somewhat diminished.

This history embraces the whole period of his illness up to about two months ago, when he came to Europe from America, where he had lived previously.

He gave us the following history of his sexual propensities with a readiness strikingly characteristic of that class of men to whose minds the subject is abnormally familiar, many particulars were even volunteered:—

When about 15 years of age he masturbated, and continued this habit for five years; if he is to be believed, he practised masturbation only once a fortnight. He then fell into the practice of having frequent connexion with women, which he continued up to the period of his marriage, four years ago, when, as will be stated, his sexual powers had become seriously impaired.

He had nocturnal emissions once or twice a week, and whenever he took a pint of beer in the evening an emission was sure to occur during the night. The emissions were or were not attended with erection, as it might happen; but in the morning following he felt languid and weak, and his giddiness and weakness of sight were temporarily augmented. The emissions were arrested by treatment, but they returned, and continue to the present time. He told us that before his marriage, four years ago, he used to visit his future wife every evening, and whilst in the house his penis was in a constant state of erection, and he always felt languid and debilitated in the morning. For a period of fifteen months after marriage he was rarely able to have intercourse with his wife, erection subsiding before he could effect his purpose.

On his admission into the Hospital he was pale and cachectic; he was giddy at times, but his sight had quite regained its normal acuteness, though the right pupil was rather larger than the left. His bowels were very costive; there was slight failure both in the retaining and expulsive power of the bladder. He could not walk above thirty yards without resting, nor could he stand steadily without support. In walking he placed his legs rather apart, deposited his heels heavily on the ground, and sprang his leg forward with a sudden, abrupt movement, the whole reminding one of the gait of a man with a cork leg. He could not advance above three or four paces without danger of falling. Sensation was perfect. Both testes were very greatly atrophied, particularly the right one, and were very soft. Seminal discharges continued. The sounds of the heart were natural. The urine was acid, but deposited a cloud of phosphates; it was free from albumen and sugar.

The patient remained under treatment from October 24 to the following January. The treatment consisted of tonics and a generous diet, cod-liver oil, strychnine, and phosphated oil. The lower extremities were stimulated by galvanism, and the emissions were controlled by a bougie and cold hip-bath. Some amendment was effected, but the result of treatment was not very satisfactory.

I have been informed by Mr. Goodall, our former House-Surgeon, that at the time one of the preceding cases was under treatment in the Hospital, a young man was admitted for a Surgical complaint, under one of my colleagues, who was also the subject of paraplegia; the paralysis had increased gradually. The only cause which could be discovered in explanation was that the youth had indulged in masturbation.

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Medical Times and Gazette.

SATURDAY, OCTOBER 31.

◆

A HANDFUL OF ETIOLOGICAL AND STATISTICAL MISTAKES.

Dr. Christison (a) has taken our breath away, and, now that we are beginning to recover from the shock, we are disposed to look round to the bystanders, and ask if his blow was a fair one. For a long time past we have been striving with might and main to inculcate and enforce the doctrine that dirt in all forms—dirty air, dirty houses, dirty food, dirty water, dirty clothing, and dirty skins—were among the most influential of the causes which promote the spread and fatality of disease. And now we are told almost in so many words that we might have saved ourselves all this trouble; for if Dr. Christison be right, we have most assuredly been labouring under a delusion, which has, moreover, cost the Metropolis the expenditure of a kingdom's income. A doubt upon what we are accustomed to regard as an established principle, when expressed by one of Scotland's representatives at the Medical Council, and one of the most illustrious of the Professors of Edinburgh, is not to be regarded as it would be if issuing from one less distinguished. There are plenty of persons who will be ready enough to quote the learned Professor of Edinburgh to our disadvantage, and to parade before our eyes in future the discomfiture which he has endeavoured to lay upon us. Putting aside what Dr. Christison doubts respecting the local origin of other diseases—such as ague, typhus, diphtheria, etc.—we fix upon his remarks about typhoid or enteric fever as those in which his scepticism becomes most rampant. "Of all the forms of fever," he says, "none has been more confidently ascribed than this by London writers, Medical and non-Medical, to faulty drainage and faulty provision of water-closets. . . . But I am sorry I cannot call on you to assent to this theory, and carry out its consequences, for there are insurmountable facts in the way." And then he proceeds to assert, with respect to London, that while this scourge has been alternately growing and diminishing, London has not become alternately worse and better drained, nor the habits of its working-classes alternately less and more cleanly; and that the disease does not generally appear where drainage is bad, or waterclosets wanting or faultily constructed. Now, we should like to know from what source Dr. Christison has ascertained that typhoid fever has in the course of the last few years been alternately growing and diminishing among us? Certainly, it varies with season; but this is evidently not what he means. The only public source of information we know of on this head is the Registrar-General's Annual Summaries of Mortality in London; and these, as he himself admits, do not distinguish typhoid from typhus and relapsing fever, and, besides, they include a variable number of deaths under the same name, which would have been referred more correctly, had the diagnosis been accurate, to pneumonia and the phenomena which attend the close of life in the aged. Fever, taken in the general sense indeed, does fluctuate year by year, but if we are to credit the experience of the London Fever Hospital, the variation is not due to typhoid, but to the occurrence from time to time of epidemics of typhus in the metropolis. The admissions of typhoid patients are, on the contrary, remarkably uniform. If the slight variations observed show anything it is this, that in years when London has been generally healthy, from the influence of a mild temperature, or other causes, typhoid, in common with other maladies, has been less frequent, and that, whereas during the ten years, 1848-57, the admissions were on an average 182 per annum, they have fallen during the subsequent five years to an average of 140 per annum, and it is during these years that London has, on the whole, had the advantage of a vastly improved drainage, and that local sources of miasma have been most carefully sought out. And who told Dr. Christison that the drainage of London in the places where typhoid cases come from (for this is the real test) does not become alternately worse and better? We can inform him that it does, and that just in accordance with these alternations the places which are thus altered do become alternately liable to and free from typhoid. We can tell him, too, if he doubts the accuracy of the views now held upon the subject by Londoners, that typhoid does habitually break out where the drainage is faulty, not only so, but where other causes of miasmata are in operation, as in the vicinity of unwholesomely-kept stables and cow-sheds, and where accumulations of decaying organic matter poison the atmosphere with their effluvia. The drainage work which has been carried out in London is very much misunderstood. It is apt to be measured by the miles of new sewers constructed, without reference to the condition of the sewers subsequently, or to the extent to which the house-drains have been connected with them, and the care with which they have been trapped, etc. Very lately the authorities of a now notorious parish in the east of London have been repelling the accusation of neglect, by pointing to the number of streets, into which sewers have been laid, while we know that the house connections have not been made to correspond. London, too, is still poisoned with sewer gases issuing from the ventilating openings in its streets, which are almost universally unprotected by any absorbing apparatus; and even where houses have been connected with the sewers, it is no uncommon thing to find that old drains have been left, perhaps for the convenience of adjoining premises, perhaps from bare negligence, and that in various ways, such as the burrowing of rats, the foul gases from them have still found access to dwellings as readily as ever. Cesspools, in place of being emptied and filled in, are often simply covered over, and remain as completely noxious as before the new drains, which are supposed to replace them, had been laid. All that is read even in the returns of sanitary work accomplished in the London parishes, as paraded in the reports of the Medical Officers of Health, must not be taken for gospel; they represent an approximation to the truth, but not the truth itself. And then as to alternations of good and bad drainage, everybody knows how carefully the system of sewerage in London requires to be overlooked. We, ourselves, very much question, even now, whether this system is altogether well adapted to the circumstances of poor localities, where ignorant people are continually removing and losing their bell-traps; throwing cloths, brushes, and rubbish down their waterclosets; stealing the waterpipes for the sake of the lead they are made of; breaking their syphon traps with pokers in the expectation of overcoming obstructions, and in a thousand ways damaging the apparatus of pipe drainage provided for their health and comfort. If the obstruction at one time, and then the clearing and unstopping of drains, the existence and then the remedying of occasional accidental sources of sewer miasm, do not constitute alternations of good and bad drainage, we, for our part, do not know what does. The street sewers themselves are liable, if badly laid, to become at length little else than elongated cesspools, which even the most regular flushing will not render clear, or anything else but conduits of deleterious vapour. And thus they must and will remain until the system of construction and disinfection recommended by Mr. Rawlinson at the meeting of the Social Science Congress last year shall be generally adopted. London—or rather varying parts of London—are and will continue to be from all these causes alternately well and badly drained. And there will continue to be alternately present and absent other sources of foul air, according as accumulations of matters which produce are alternately present and removed from amongst us. But one of the questions which Dr. Christison answers in the negative is—"Does the disease appear generally where drainage is bad or waterclosets wanting, or faultily constructed?" And it is to the reasons for this negative reply that we now beg attention.

(a) The President's address in the Public Health Department of the Social Science Congress, delivered in Edinburgh on October 13, 1863.

They are these. He appeals to his experience in Edinburgh. He says, "Our street drains in the old town have been much improved during the very period that enteric fevers have been increasing." To make this argument of any value, he must go further, and show that while the street drains have been improved there has been a corresponding improvement in the house drains; that the houses which have been thus improved are those in which, nevertheless, the seeds of fever are taken into the system, and, moreover, that no other cause of miasma is present to propagate typhoid. We are quite ready to be convinced if Dr. Christison will show us this. Our experience in London is directly to the contrary, and either we are right in attributing typhoid to these causes, and then Dr. Christison is wrong, or we are somehow marvellously deceived in our every-day experience, and it lies with Dr. Christison to show us the root of our fallacy. But Dr. Christison appeals to individual cases. He says, "In many of them it has been impossible to discover any peculiar source of foul air—anything different from what may be met with in thousands of dwellings where this fever has never shown itself. Of the seventeen deaths hitherto this year, nine occurred in localities to which no objection could be found." Impossible? We should like to know the amount of care bestowed upon tracing the source of foul air before we agree to accept this word. Nothing but the most thorough search in and about a house, and especially under the house, by a person accustomed to the work, will often discover the source of the poison. We need not repeat ourselves, we have already mentioned more than one source which would readily escape the notice of a superficial observer. But granting that cases are met with in localities where nothing amiss in drainage or otherwise is present to account for the fever—and we readily do so, for it is a truth we are conversant with—does it follow that local miasm received elsewhere has not been at the bottom of the mischief. Dr. Christison alludes to its being met with among people of easy circumstances; so it is sometimes, but much more commonly among their servants, who occupy the basement rooms of the houses, and are more exposed than they are to the noxious gases which may enter the very best houses in the kingdom. But these people that he refers to are not constantly at home. Some of them may go daily to their warehouses, counting-houses, or shops, others may travel about the kingdom, sleeping in hotels, and in any of these places, equally with their private residences, they may absorb into their system that which will give rise to enteric fever. We happen to have a case under our own care, as we write, where, in a house which we know to be well drained, a young man, in good circumstances, is lying ill with typhoid. He did not receive the poison in that house. He had come ill from the suburbs of St. Heliers, in Jersey, where he had been on a visit for ten days; the house which he resided in there is one of the least to be suspected in the island; but neither did he get the fever there, for we have had to travel to Belfast, from which he had previously come, more or less out of health, before we were even near to the locality where the miasm had operated that induced the attack; little inquiry was needed to discover the source of his malady in that town. We could instance an abundance of cases of a similar character. Lastly, Dr. Christison thus sums up his argument:—"This fever does not by any means generally break out where the streets are ill-drained, waterclosets wanting, and habits filthy. In countless places of that sort in Edinburgh it is unknown." And so it is unknown in numerous other places of that sort besides such as may be in Edinburgh. We need not go out of our own country to illustrate this, although doing so would, perhaps, render our reasoning stronger. It is so in London. But what of this? Dr. Christison is no such novice in etiology as not to know that this sort of reasoning would lead us to deny even the infectious character of so infectious a disease as scarlet fever. Who does not know that scarlet fever may enter a house full of children, all of whom may be exposed to the infection, and yet all of whom, from one cause or another—some of which we may understand, and others of which we do not understand—may escape its attack, and yet that the very same children may afterwards contract it from an exposure far more brief, much less readily discoverable. Because scarlet fever is infectious, it does not follow that all exposed to the infection must be attacked. Although the rule is a general one it is not universal. And so with typhoid fever, it is not all, even in a badly-drained house which fever enters, that suffer from an attack; there must be conjoined causes to favour the operation of a specific cause, whatever it may be. And so it may happen, and does happen, that many badly-drained streets and houses are free from typhoid, and may remain so year after year. But because bad drainage and local miasmata do not always induce typhoid, it by no means follows that the disease does not generally break out under circumstances where such a cause may be traced to have been in operation. We assert it fearlessly that such is the fact, and we say that just in proportion as diligence is exercised in tracing out the origin of the disease in individual cases, in the same proportion will the conviction of the truth of the doctrine of the day be more firmly established in the mind of the inquirer.

Here for the present we must stop. It is but justice to Dr. Christison to add that he is not the only reasoner on sanitary matters who has been led into the error of drawing unfair or partial inferences from acknowledged facts. Instances of the same mistake are only too common south of the Tweed. To some conspicuous ones we intend, ere long, to invite attention.

THE WEEK.

THE PRINCESS OF WALES.

The announcement lately made in the *Observer* of the approaching accouchement of H.R.H. the Princess of Wales in March next, is the *first authentic* report of the fact which has appeared. Our readers will be glad to learn that her Royal Highness's health is at present excellent. It is stated in the best informed Professional circles that the honour of attending her Royal Highness will probably devolve on Dr. Arthur Farre.

THE ARMY MEDICAL DEPARTMENT.

The Army Medical Department ought to attract the best men. It does the very reverse. Any man possessed of the private means, the education, and social position, and the Professional acquirements necessary for rising in life, would be sacrificing his prospects if he were to enter the Army. We have lately discussed the minor and major grievances of the Army Surgeons, and, in respect to some of the former, think that a very slight modification or compromise would remove whatever is exceptional and degrading to the Army Surgeon. We think the enforced payment for rejected recruits not an unjust, but a doubtful measure on the part of the present Director-General.

No Surgeon is obliged to pay for a recruit if he adheres to the Regulations; and if any recruit be rejected by three Medical men, sitting on a Medical Board, the certifying Surgeon has no just ground of complaint. Nevertheless, from motives of expediency, this regulation had better be abolished. (It was originally proposed by Lord Palmerston more than twenty years ago). With regard to a proposal made some time since to amalgamate the Medical officers of the late European Army of the East India Company with the existing English Army Medical Department, it clearly would have been, in our judgment, most unfair and injurious to the latter, and therefore if, as is said, the present Director-General caused it to be abandoned, he is much to be thanked. It would have flooded the service with a large number of Assistant-Surgeons from India, and effectually have stopped promotion for those of the British Army. It is said in well-informed circles that an effort will be shortly made to give satisfaction to the British Medical officers serving in India, and likewise to provide handsomely for the Indians. For the former, it is said that Surgeons and Assistant-Surgeons serving in India are hereafter to have the *allowances of their military rank* and the *pay of the Warrant;* and the Surgeons of regiments who are not Surgeon-Majors will lose a little, for *head-money* and *charge-money* will no longer be allowed; yet all the Assistant-Surgeons and also Surgeons-Major will gain. For the Indian Medical officers a new Staff Corps will, it is said, be established, in order to provide for the native regiments and for Civil employment. This will be quite a new branch, and will enjoy better pay, quicker promotion, and earlier retirement on better terms, and will be at first confined exclusively to such Indian officers as choose to avail themselves of it. Those who do not do so, will enjoy the same position and chance of promotion as at present. This corps will be recruited from Assistant-Surgeons of the British Service.

THE INCREASE OF TYPHUS FEVER IN THE METROPOLIS.

In a recent number of this journal we noticed that typhus fever was on the increase in certain of the metropolitan districts. We are now able, through the courtesy of Dr. Buchanan, one of the Physicians to the London Fever Hospital, to present our readers with the statistics of the Hospital on which our statement was founded. Some patients of the London Fever Hospital are admitted free, others by recommendation of subscribers, but the majority are sent in by certain parishes and unions which pay to the Hospital a small sum for their maintenance. The greater number of the London unions avail themselves of the advantages offered by the Hospital, but some do not. Hence the following numbers cannot be held to represent the relative amount of fever in all the metropolitan districts. In June of the present year there were 89 patients admitted into the London Fever Hospital; in July, 122; in August, 115; in September, 172; and in the period from October 1 to October 20, 159. On August 31 there were 80 patients in the Hospital; on September 30, 134; and from October 9 to the 20th the number had risen to 180. Since October 9 the woman's side of the Hospital has been quite full, and the man's side nearly so. Patients have daily been refused admission, and the increase of fever cases has been so marked and so rapid that the Physicians have thought it necessary to urge on the Committee of the Hospital the propriety of erecting a shed to accommodate 60 extra patients.

The following table shows whence the patients have come, and what is the character of the fever with which they are attacked :—

Union or Parish.	Admitted in September, 1863.				Admitted from October 1—20, 1863.				Remarks.
	Typhus.	Typhoid.	Scarlatina.	Other Diseases.	Typhus.	Typhoid.	Scarlatina.	Other Diseases.	
Battersea	—	—	—	—	1	—	—	—	
Bethnal-green ..	2	1	—	—	1	—	—	1	
Bermondsey	24	—	—	1	14	—	—	—	
Camberwell	—	2	—	—	5	—	—	—	
Chelsea	—	—	—	2	—	—	—	—	
Clerkenwell	2	1	—	—	—	—	2	1	
Greenwich	1	—	—	—	1	—	—	—	
Hackney	—	—	—	3*	—	—	—	—	* 1 measles.
Holborn	1	—	—	1	1	—	—	1	
Islington	1	4	7	6*	1	2	4	1	* 1 small-pox.
Kensington......	—	—	1	1*	1	—	3	1	* 1 small-pox.
London, City	—	—	—	1	—	—	—	—	
,, East....	—	1	1	—	7	—	1	—	
,, West ..	—	—	—	—	2	1	—	—	
Lambeth	15	1	—	2	19	1	—	—	
Marylebone......	2	3	4	2	4	4	2	4	
St. Pancras	2	—	1	1*	4	—	—	3†	* Small-pox.
Newington	1	—	—	—	4	1	1	1	† 1 measles.
Rotherhithe	5	—	—	—	4	—	—	2	
Shoreditch	2	—	1	1	2	—	—	—	
Strand	2	—	—	—	4	—	—	—	
St. James's, Westr.	1	—	—	—	—	—	—	—	
St. Margaret's ,,	1	—	—	3	2	—	—	—	
St. Martin's......	4	—	3	—	2	—	—	—	
St. Olave's	3	—	—	—	6	—	—	—	
St. Saviour's, Southwark ..	9	—	—	—	3	—	—	—	
St. George's, East	15	5	—	1	9	1	—	2	
Wandsworth	3	—	—	1	2	1	—	2	
Subscribers	—	3	5	2	—	—	8	1	
Free	—	1	1	—	2	—	1	—	
Unascertained ..	1	—	—	?	2	—	?	1	
Totals	97	22	24	20	103	11	22	23	
	172				159				

It will be seen that the greatest number of typhus cases have been furnished by the districts of Bermondsey, Lambeth, St. Saviour's (Southwark), and St. George's-in-the-East, but the evil is by no means confined to these parishes. It is clear that the seeds of continued fever in its most contagious form are scattered over the metropolis, and the crop which they have already yielded is the worst augury for the ensuing winter. If the season be severe, and, as a consequence, the labouring poor, reinforced in numbers from the North, crowd together in their ill-ventilated dwellings, we may confidently predict that the winter will prove a disastrous one. Whether overcrowding and filth, *per se*, be sufficient to produce typhus is an open question, but their influence in fostering and favouring it is as certain as any fact in the whole range of science. There may yet be time, by the enforcement of sanitary measures, by a more liberal water supply to the houses of the poor, and by careful segregation of the sick, to avert the impending danger. We are informed that its magnitude and imminence have already been represented to the Medical Officer of the Privy Council by Drs. Murchison and Buchanan. With regard to the type of fever already observed, we can state that at present the mortality has been small, although the cases have been characteristic and unmistakable. They have all presented a well-marked mulberry rash, and have terminated about the fourteenth day. Hitherto, the fever seems to have attacked women in larger number than men. We regret much to learn that one of the House-Surgeons of the Fever Hospital has contracted it.

THE LOCK HOSPITAL.

At the present time, when public attention is directed to the necessity of State interference to limit the greatest evil of civilisation, and to lessen its consequences, the Annual Report of the only Metropolitan Hospital devoting its resources entirely to the latter object has a special interest. The history and fortunes of the Lock Hospital are soon told. It dates back to the year 1745,—a proof that the stirring political events of the time had not even temporarily arrested the flow of charity. Forty-two years later an asylum, in connection with the Hospital, for the reception of women who, having been cured, might wish to abandon their mode of life, was founded by the Rev. T. Scott, the well-known commentator. Up to 1842 the Hospital and Asylum stood in Grosvenor-place; in that year a freehold site was purchased in Westbourne-green, where the present Hospital was erected. In 1847, a chapel was added, by the congregation of which a considerable portion of the funds of the charity have since been supplied. The next forward step resulted from a determination on the part of the Governors to separate the male and female patients in different buildings, and the house, 91, Dean-street, Soho, was opened as a Hospital for male in-patients, and for the treatment of male and female out-patients, in August, 1862.

The Medical details of the report are scanty—little more than the numbers of patients admitted, whence they came, their age, and social condition. Of the 418 in-patients admitted last year, 204 were male and 214 female; 344 of these came from London and its neighbourhood, the western districts of Marylebone, Paddington, Chelsea, Brompton, St. Pancras, and Westminster furnishing the largest proportion. Nearly one-third of the patients were born in London. About three-fourths of them could read and write, and nearly two-thirds of the females were under the age of 21. Of the 418 patients, it is reported that 378 were cured, 36 remained in Hospital at the end of the year, and 4 had died.

Fifty-six young women had been sent into the Asylum from the Hospital. Of these, 20 have been placed in service, and 21 restored to their friends.

The Hospital is now urgently appealing for increased pecuniary support, and we hope that the public will meet its appeal in no niggardly spirit. It is the very type of the institution which the representatives of public opinion are urging on the Government to establish in the neighbourhood of camps and garrisons; but any Medical man who is acquainted with the sanitary condition of the proscribed classes in London, knows full well that the want is no less here. In the Lock Hospital a machinery is ready to hand, it has been tested by a century's trial, and found worthy of all confidence. Surely, the first practical measure suggested by the present need is to extend its operations.

THE NEW YORK STATE SOLDIERS' DEPÔT.

We have heard so much of the hardships and miseries suffered by the soldiers of the Federal army at Vicksburg and elsewhere, that we are glad to find that the picture has a reverse, and to be able to inform our readers of the existence of an institution which appears to be in every respect worthy an enlightened and civilized community, fully recognising its obligations to those who draw the sword in its service.

The State Soldiers' Depôt, situated in Howard-street, near Broadway, New York, is an institution which has been in operation five months, and during that time it has fed and clothed more than 8000 soldiers who were on their way home or returning to their ranks, or has placed them, if sick or disabled, in Hospital, and cared for them until recovery or death has made care no longer necessary. The institution provides a regular system of couriers, agents, and assistants, wagons and ambulances, for collecting the soldiers and bringing them to the depôt at New York. There are three principal stations, at Washington, Baltimore, and Philadelphia, where the soldiers are collected and forwarded, under charge of couriers, by rail to the depôt. The steamers, also, arriving from points where the armies are stationed, are met at the wharves by wagons and ambulances, and those soldiers who are willing to avail themselves of the benefits of the depôt, are taken thither, or to the railroads which are to convey them to their own homes. At the depôt the utmost cleanliness, neatness, discipline prevails. A soldier on arriving is immediately washed and shaven. The report we have seen states :—

> "He cannot emerge from the basement of the depôt, where extensive cleansing and scrubbing apparatus is situated, until he is thoroughly clean. He cannot avoid using it, even if he would. But the soldiers appreciate the luxury of the bath-tub. There are many bath-rooms with all conveniences, and the great pleasure these men feel while employed in their ablutions is demonstrated by the uproarious mirth in which they indulge on all such occasions. A soldier on arriving here must surrender his soiled raiment. He gives it in exchange for other clothing ; and it will be supplied to some soldier who may take his place as it was supplied to him. So, while no man, it may be said, owns a shirt, he nevertheless has one, and all go clean. In this manner the extraordinary neatness of the depôt is continually preserved."

The strictest military discipline is preserved. All the officials of the establishment, from the Medical officers downwards, report daily, each morning, to the Superintendent, Colonel Neville, the state of their respective charges, and the whole depôt is afterwards inspected by him. The present building is four stories high, it has five floors, which include a Hospital and every accommodation for the sick and wounded. It is proposed, however, to enlarge the building to an extent which shall give room for two full regiments. The cost of this undertaking presents a marked contrast to the general lavish waste and expenditure of the Federal Government. The whole expense has hitherto not exceeded 25,000 dollars. The general feeling of aversion inspired in this country by the American civil war, must not prevent our rendering full credit to the devisers and executors of such an undertaking as the New York State Soldiers' Depot.

MEDICAL PORTRAIT PUFFERY IN AUSTRALIA.

MOST of our readers will recollect that the *Lancet* some years since set at naught that decent reserve which is an essential character of a scientific profession, and induced several Practitioners in London to have their portraits and biographies published in that paper. Of course the biographies were written by the men themselves, all of whom are, we suspect, by this time heartily ashamed of their share in the transaction. The evil of such a course is this, that it brings the man of science and the charlatan to the same level. Of course every rascal can sit for his portrait, and can write a history of his own life and professional achievements ; and it would be very odd if the imagination of the charlatan could not produce a much more striking catalogue of cures and discoveries than the scientific man could honestly gather from the sober records of his work and experience. Like other bad customs, this form of Medical puffery has travelled to the Antipodes. Mr. J. B. Beaney, who is, we dare say, an able Practitioner, a good operator, and possessing all the qualities necessary for rising in this life—not overweighted, too, with diffidence or *mauvaise honte*—was not content to trust to his Professional merits and repute, but consented in evil hour to appear as No. 1 in a series of biographies of Medical celebrities of Victoria, with portraits, which were to be published in the *Illustrated Australian News*. We have seen that biography, or autobiography, and frankly say that no respectable profession could tolerate such a gross deviation from good taste and self-respect as it evinces. And it *is* not tolerated. Mr. Fitzgerald, a Surgical colleague, refused to meet Mr. Beaney in consultation. He might fairly say, a man who relies only on the propagation of his good fame through the common channels of society ought not to be called on to compete with one who can write a highly imaginary and eulogistic life of himself and placard the town with his portrait.

A lawsuit was the consequence. Mr. Beaney brought an action for slander against Mr. Fitzgerald, to recover damages for certain statements made by him to a patient, a Mr. McDonald, since deceased, and to a Mr. Spiller, on the latter asking Mr. Fitzgerald to meet Mr. Beaney in consultation in the case of McDonald. The evidence of McDonald was taken a day or two before his death, and it was to the effect that Mr. Fitzgerald had refused to meet Mr. Beaney, on the ground that he was an advertising doctor, that he had bought up his votes for the Hospital, and "that it was generally believed that his diploma was not good. He (Mr. Beaney) said it was from the United States, but there was a doubt cast upon it, whether it was genuine from there." The evidence of Spiller only proved that Mr. Fitzgerald refused to meet Mr. Beaney because "he was an advertising doctor—or an advertising man." Without reproducing all the details of the trial, it may be stated that the defendant utterly denied having thrown any doubts on the validity of the plaintiff's diploma, which he said he well knew was an Edinburgh one. The main argument for the defence was that the statements made by Mr. Fitzgerald to McDonald and Spiller were to be considered as privileged communications, and that the allegations were true —that Mr. Beaney *was* an advertising doctor. The portrait was exhibited and the biography produced and commented on in open court by the counsel for the defendant, and, as may be supposed, afforded fair game for such forensic wit as passes muster in the colonies.

> "*The Medical Celebrities of Victoria*, No. 1.—Was 'No. 2' ever published ? No ; I believe it never got to 'No. 2.' Only imagine, gentlemen, if it had run on to any considerable number ! Why, if all the Medical men in Victoria had rushed in with their autobiographies, the scene would have been like Mr. Squeers's boys at the Saracen's Head. The editor would have had to keep them all back with a crack on the head, till each came in his turn. 'Now, then, No. 2 may have a drink ! Now, then, No. 3 may come forward and have a drink.' . . Then the autobiography goes on, 'this eminent Medical Practitioner was born at Canterbury, in Kent.' Why, it reminds one of the celebrated Mr. Vincent Crummles, when he denied the imputation which he supposed to have sprung from the malignity of a rival manager. Then Dr. Beaney was born 'on the 15th day of February, 1830,' like the gentleman who was born in Tipperary at a very early period of his existence. Then 'at an early age he evinced an ardent desire to study'—what a promising little boy he must have been. 'He was articled to William James Cooper, Esq., of Canterbury, a gentleman of high character and great Professional attainments, *and brother to the eminent cattle painter of the same name*.' Was there ever a greater instance of literary bathos ! . . . 'Cholera appeared' in the regiment (a militia regiment in which the plaintiff had served during the Crimean war) just as the plaintiff joined — rather a curious coincidence ! However, 'for his unremitting attention, Mr. B.'—he's quite familiar with himself you see, gentlemen — even this great man — 'received the thanks of His Excellency.' He arrived in this colony by the *Shooting Star*—what an appropriate introduction ! Then we come, gentlemen, to the description of the plaintiff's manner in the sick room, and particularly to his 'self-reliance ; ' and we finish with a climax thus :—'Taking our leave of Dr. Beaney, we cannot help exclaiming *palmam qui*

meruit ferat,'—that is to say, no doubt, in the plaintiff's case, that he's the man who will get as large a fee in his palm as he can, and when he gets it will bear it off. Now, gentlemen, you see the taste and tone of the whole of that production, and you can judge whether my client, by calling him an advertising Doctor, said what was untrue, or said anything that was likely to do him harm."

It was proved by the editor of the *Illustrated Australian News* that Mr. Beaney had furnished him with the MS. of the biography, and had also paid him £30 for the engraving of the portrait. As the jury could come to no decision in consequence of the discrepancy between M'Donald's and the defendant's statement, they were ultimately discharged. Truly, if Mr. Beaney's wish were to procure notoriety, he has achieved it, but he will probably live to learn that reputation and notoriety are fruits which do not always grow on the same stalk. We reproduce for the amusement of our readers, in our "Notes and Queries" column, a copy of verses on the whole affair from the *Melbourne Punch*, only observing, in justice to Mr. Fitzgerald, that his conduct seems to us to have been anything but "foolish." He appears, as far as we can judge, to have been actuated throughout by that proper respect which every professional man must maintain for his profession, and for himself and his own position as its representative.

FROM ABROAD.—M. TROUSSEAU'S RESIGNATION—PRIZE SUBJECTS OF THE BRUSSELS MEDICAL SOCIETY—CAUTERISING THE INTERIOR OF THE UTERUS—MORTALITY OF THE ARMY IN THE UNITED STATES—RIDGEWOOD'S DISINFECTING POWDER—DISCUSSION ON HYDROPHOBIA.

WHEN so much attention has lately been excited among ourselves with respect to the duty of seniors retiring from posts they have too long held, the following admirable letter, addressed by M. Trousseau to the Editor of the *Union Médicale*, will be read with great interest:—

> "My dear Friend,—Strange reports have circulated relative to the motives that have induced me to request the Minister to accept my resignation. It has been said that I am desirous of quitting the Faculty in consequence of angry discussions which have taken place with the Dean and some of my colleagues. Nothing can be farther from the truth. God be praised, I am on as good terms with all my colleagues of the Faculty as I have always been, and great will be my regret in separating from them. I seek for my retirement because I am now turned of 62, and have fulfilled more than thirty years of active service in the University; and because to continue to conduct my Clinical Professorship as I have always conducted it will demand an amount of labour for which my strength and activity will not much longer suffice. It appears to me to be proper not to wait until the benches around me begin to be unoccupied, but to leave to rising talent the opportunity of developing itself, confining myself for still some years longer to the cases of private practice. Reflect on this well, my dear friend, and you will agree that what I am doing is at once honest and wise.—Yours always,
> A. TROUSSEAU."

The Brussels Society of Medical and Natural Science offers four prize questions for 1864:—1. The different forms of neuralgia, and the treatment they require. 2. Specify the cases in which ovariotomy is formally indicated. Discuss, supported by cases, its advantages and the inconveniences, and lay down the rules most fitting to obviate its dangers. 3. This is left to the choice of the competitors, any subject within the domain of Medicine, Surgery, or Midwifery being admissible. The Society, however, is desirous of directing attention to the four following questions:—(*a*) The part which fermentation plays in the pathogenesis of acute dyscrasic affections, with clinical observations and therapeutical deductions. (*b*) The contraindications of bloodletting in apoplexy and cerebral hæmorrhage, the circumstances being specified under which it should be had recourse to or abstained from. (*c*) The pathology of dyspepsia, as established by precise symptomatic and anatomical characters; the various affections comprised under this name being displayed in conformity to the present state of science, and the treatment suitable for each of them indicated. (*d*) What are the deductions which, in the present state of our knowledge, we can draw from Medical geography and the physiology of alimentation with respect to the etiology and preventive treatment of certain diathesic affections, such as cancer or tubercle? 4. This question is also left open, but it must relate to some subject within the domain of the natural or pharmaceutical sciences. For the best essays in reply to the two first questions, gold medals, 300 francs in value, will be awarded, and for the two last questions gold medals of the value of 100 francs. The essays, written in French, English, or Latin, to be forwarded to the Secretary, Dr. Van den Corput, 12, Rue de la Chancellerie, Brussels, before October 1, 1864.

M. Courty, of Montpellier, has recently communicated a paper to the *Académie des Sciences* upon the subject of the advantages and innocuity of cauterising the interior of the uterine cavity. M. Jobert has shown long since that in fungous granulations, or obstinate ulcerations, the actual cautery may be applied within the cavity of the cervix without causing any pain or other accident, and with a completely curative effect. M. Courty, too, has also applied the actual cautery in 300 cases, and by subsequent watching of his cases has been enabled to assure himself that no ill consequences whatever have resulted, menstruation and parturition proceeding as in the normal conditions. Besides these cases, however, he has had a still larger number (certainly more than 500) in which he has cauterised the cavity of the uterus itself, passing in a stick of nitrate of silver, and allowing it to break off and remain within the cavity. This is the truly heroic remedy in fungous granulations of the cavity, and in obstinate leucorrhœa. No serious accident has ever resulted from this practice, local irritation of the vagina being prevented by application of salted water, or removed by irrigations. The operation is contraindicated if acute inflammation is present. The nitrate of silver induces hypersecretion of the mucous membrane, which affords a complete protection to the organ. The mucus envelopes it as in a kind of membrane through which its action is exerted, and in seven or eight days it is discharged from the uterus in a decomposed and softened state, without having become completely dissolved.

Dr. Woodward has, it is said, completed his investigation of the Medical statistics of the United States army up to June, 1862, so that the first volume of the Medical history of the war, with the preparation of which he is charged, is ready for publication. He states that the general mortality rate during the first year of the war was 67·6 per 1000 mean strength, including with deaths from disease those from wounds and injuries. The mortality from disease alone was 50·4 per 1000, that from wounds and injuries of every kind 17·2 per 1000. The mortality of the armies employed in different parts of the country varied much. Those of the Atlantic border furnished a mortality of 33·40 per 1000 of mean strength, those of the Central region 82·19, and those of the Pacific border 10·76. The difference between these three regions is not so conspicuous in the geneaal sickness as in the mortality, yet they existed. Thus, the number taken on sick report during the year was 3368·14 per 1000 in the Central region, 2748·83 on the Atlantic coast, and 2586·60 on the Pacific, a large proportion of troops in each region having been taken sick several times in the year. With respect to some of the causes of sickness and mortality, it is reported that on the Atlantic border the annual ratio of cases of camp-fever was 238·99 per 1000, with 1 death to every 13·9 cases, in the Central region 319·94, with 1 death in 9·8 cases, and on the Pacific coast 60·95, with 1 death in 22·1. Diarrhœa and dysentery caused about one-fourth of all the deaths reported. On the Atlantic border more than one-half the army suffered, and in the Central region the number of cases almost equalled the mean strength.

A report has just been made to the New York Academy of Medicine upon a new Disinfecting Powder (Ridgewood's) said to be possessed of great efficacy. The following is stated to be its composition:—Carbolic acid, 5 to 8 per cent.; sesquichloride of iron, 2 to 5 per cent.; charcoal or pulverised pumice, 5 per cent.; lime from magnesian limestone, 5 per cent.; fuller's earth, 70 to 80 per cent.; and a trace of the sulphates of potass and soda. It results from numerous trials made that it is likely to prove a valuable means of deodorising decaying matter and preventing decomposition. It will be a valuable assistant to the undertaker in the preservation of bodies, especially after post-mortem examinations. The reports from the Army Surgeons state that it is of great service in removing the ammoniacal odour of stale urine, the smell of waterclosets, and the offensiveness of post-mortem rooms—a portion of the powder being sprinkled on the floor. It powerfully checks the decomposition of the dead body, even after this has commenced. Its great cheapness will recommend it as a substitute, under certain circumstances, for the more expensive permanganates and chlorides. The Academy report recommends it should also be employed in stables, especially in cities, for the removal of smells, and for fixing the gases whose escape impairs the value of the manures. It will prove far more efficacious than lime in purifying gutters, sewers, privies, etc.

An interesting discussion on Hydrophobia has taken place at the Academy of Medicine, consequent upon a report brought up some months since by M. Bouley, relating to some papers on *rabies canina*, submitted to the Academy. This report was a very able one, and we will recapitulate its chief propositions. M. Bouley is of opinion that Hunter's conclusion, that about 5 per cent. of persons bitten by mad dogs contract hydrophobia is nearly correct. It is evident that man is far less susceptible of the disease than the dog, for while more than 100 dogs die annually in Paris from rabies, only two or three persons contract hydrophobia. It is found that bitches are subjects of rabies in far less numbers than dogs, but their actual number is less than that of dogs, while their owners keep them more secluded. But in the human subject also the male sex is a far greater sufferer from hydrophobia than the female, the statistics of the disease in the Department of the Seine during forty years furnishing 63 cases in males to 31 in females. While in the great majority of cases rabies is produced in dogs by bites, M. Bouley is of opinion that it may also arise in this animal spontaneously, being unable to explain in any other way the very great variation in the number of cases which is observed in different years. Statistics prove that the popular opinion, that rabies is especially and almost exclusively a disease of the hottest months, is entirely erroneous, the same number of cases having, in fact, occurred in December and July—the disease seeming to be especially prevalent in the wet months. Very extreme periods have been stated as those within which hydrophobia may manifest itself; but in the immense majority of cases it does so between the first and third month. The point upon which M. Bouley dwells at greatest length, in consequence of its extreme importance, is the *diagnosis* of the disease in the dog, especially in its early stages. That the public mind should become familiarised with this he regards of the greatest consequence; for at present great ignorance prevails in the matter, highly characteristic symptoms being constantly overlooked, popular prejudice so associating the idea of rabies with fury, that precautions are neglected so long as the animal has not shown a propensity to bite. Youatt long since pourtrayed with admirable exactitude the earlier changes in the appearance of the dog which it is so important to seize. We should always distrust a dog when he becomes dull and morose, incessantly restless, barking without motive, and is continually seeking for something he never finds. One of the circumstances which most puts his owner off his guard is the fact that the animal, at first, manifests a much-increased fondness for him, and will make no attempt to bite him long after he has become dangerous to other persons. The popular prejudice that the dog manifests *hydrophobia* is highly dangerous. So far from having any horror of water, he laps it eagerly, although deglutition becomes difficult or impossible, owing to the constriction of the fauces. He soon becomes disgusted with his food, but he manifests a remarkable propensity for tearing with his teeth, and swallowing foreign bodies of the most diverse kind. We should always strongly suspect a dog when we find him obstinately tearing articles of furniture, gnawing the wood of his house, or devouring the soil of the garden or the straw of his litter. The abundance of slaver is by no means the common characteristic it is believed to be, and its absence is no proof that rabies does not exist. Sometimes the mouth and throat are entirely dry, and this gives rise to movements of the animal indicative of a bone sticking in the throat. The owner of the dog, seeking to remove the obstacle, has more than once been fatally wounded by the teeth. Vomiting is sometimes a symptom at the commencement, the rejected matters being sometimes sanguinolent, owing to the injury done to the stomach by the foreign bodies swallowed by the dog. This is a very important symptom, and does not always excite sufficient alarm. The barking of a mad dog is quite characteristic, and once heard can never be forgotten. Its verbal description is difficult, but the important point to bear in mind is that distrust should always be excited when the well-known voice of a familiar dog undergoes sudden modification, giving rise to unaccustomed sounds. The mad dog is far less sensible to pain than in the normal state, and will remain unusually mute under its infliction. A very curious circumstance is the impression which the sight of an animal of his own species exercises upon the mad dog. This becomes a very important means of diagnosis in doubtful cases; for, quiet as the animal may have been before, and unaccustomed when well to bite, he no sooner sees one of his own species than he manifests the most aggressive conduct. When first seized with rabies it is not uncommon for a dog to desert his home, to which, perhaps, he returns, presenting a miserable aspect,—covered with mud and blood. His reception must be most guarded, for, by this time, his propensity to bite has quite overcome his affection for his master. We need not pursue M. Bouley's interesting analysis of the symptoms of rabies after the disease has become fully developed, our object being to assist in disseminating what he regards as the really important information as to how the disease may be best detected in its early and unsuspected stages. It is upon the diffusion of such knowledge that he chiefly relies for the diminution of the ravages of hydrophobia, having little confidence in the efficacy of administrative measures. The success which has been said to have attended the muzzling of dogs in Prussia has been disputed, and at all events the mode in which this practice is put into force in France is a mere subterfuge. It cannot be otherwise, for the law seeks to exact an impossibility, seeing that for the purpose of transpiration it is essential that the dog should be enabled to open its jaws. A kind of cage fixed around the head of the animal would constitute an efficacious apparatus, but its ridiculous appearance would soon cause its discontinuance.

CAMBRIDGE.—The building now being erected in the Old Botanic Gardens, for the museums and lecture-rooms of the Professors, is making rapid progress, and, notwithstanding the outcry raised against the design, the building presents a handsome appearance. Want of funds, according to the plan, necessitated the postponement of the building to contain the collection of comparative anatomy. This was a matter of great regret to all who were interested in the accomplishment of this important object. Dr. Clark, the Professor of Anatomy, has offered to advance the requisite sum, that the design may be carried out forthwith.

NOTES ON SOME OF THE PARIS HOSPITALS.

(From an Occasional Correspondent.)

(Continued from page 441.)

LA CHARITÉ.

La Charité is one of the oldest Hospitals in Paris, and is built in the form of three squares; it contains 494 beds. Some of the wards are very long, containing about 90 beds, but they seem purer and cooler than usual; as in the other Hospitals, the beds here are too much enclosed with curtains. It is here that Velpeau has gained his reputation, that Piorry continues his investigations by means of percussion, and that M. Beau pursues his theory of a moral cause as the origin of all diseases.

When I went round with M. Velpeau there appeared to be rather a large number of cases of erysipelas in the wards, at least two of his patients had it, and one was just recovering from it; there was a case of ligature of the common femoral, but it was fatal; and I saw one or two fractures put up in starched apparatus. Afterwards there was a clinique, followed by an amputation of the thigh, and the patient was really under the influence of chloroform before the operation was finished, not at the first though, for the test of his being ready was to ask him if he heard, and if there were no answer the operation was begun. The French say that chloroform is so much abused in England, that every day some deplorable accident happens, but they do not even use it, and only when the patient will not be operated on without, and then only till he is about half under its influence; but of a large number of cases I have only seen two persons really under the influence of chloroform.

M. Piorry gives a clinique on Mondays, Wednesdays, and Fridays, but those are not the best days to see his practice. Percussion is his great pursuit, and I had no idea that it is used in so many cases; besides the lungs, liver, and the organs one ordinarily sees percussed, he percusses the kidneys, the pancreas, the uterus through the sacrum, the spinal column, the Eustachian tube, the mastoid cells, the cerebral sinuses, and the aorta through the chest, and marks on the patient's linen the abnormal sizes of those organs, or speaks confidently of their abnormal state, as evidenced by a dull, where there ought to be a hollow sound, and *vice versâ*. He has also given new and classical names to most diseases, and one sees such words as pneumonite, pio-pneumonite, cardeosie, alcoocephalie, phymie, hypemie, hypogastrie, etc., etc.; and one patient's card had on it the four following words:—Ileo-spilosie (typhoid fever), scarapterosie (constipation), splenomegalie (intermittent fever), and speumoseterosie, any one of which is long enough to be fatal. There are some good cases in M. Piorry's ward, and the student has ample opportunity of listening to percussion in its every variety, but, for my part, I confess that I cannot always distinguish between a dull and a hollow sound, unless the latter is produced by tapping with the fingers and nails, and the former with the fingers only. The first case we stop at is one of emite-arthrite, or acute rheumatism, which M. Piorry treats by bleeding, either general or local, and blisters to the swollen joints, and he complains of the bad fashion of not bleeding; next is one of nephrite-albumineuse, or Bright's disease; the kidneys are percussed and found large, and the patient is ordered not to take liquid of any description, not even soup, the Frenchman's favourite food; he is ordered a little quinine also. The next case is one of ileo-spilosie, or typhoid fever; injections are ordered, and the abdomen is to be rubbed in a direction so as to drive the gases towards the sigmoid flexure. The next bed is evidently a case of phthisis in the last stage; it is marked pneumo-phymie, the latter word meaning tubercles. In the female ward I saw the uterus percussed through the sacrum, and a tumour found, but it could not be discovered by a vaginal examination. M. Piorry thinks that stone in the bladder might be detected by percussing the perineum. Some enterprising Frenchman has discovered a medicine which reduces the size of the spleen as soon as it is taken into the stomach; the discoverer keeps the composition of the medicine a secret, but it is said not to contain any quinine. One morning I saw it tried here in three cases of typhoid; the size of the spleen was first accurately marked on the skin, the dose then given, and the organ almost immediately—in forty seconds in one case and sixty in another—found to be about half an inch less all round. I confess that here my want of experience unfortunately failed to give the outlines that M. Piorry's more practised ear enabled him to make.

THE ST. LOUIS.

Excepting the Hôtel Dieu, the St. Louis is the largest Hospital in Paris, and, with the exception of two Surgical wards, is devoted entirely to the treatment of diseases of the skin; it contains 810 beds. It is a curious old Hospital, built in the form of a large square, and having a garden in the middle; but besides this square there are separate pavilions; altogether it is built on a very large plot of ground. The wards contain a great many beds, and most of them smell very strongly of tar. It is in a poor, dirty district, and therefore in an excellent situation for a Hospital, especially for one devoted to a disease which depends so much on the habits of the people,—and the French are eminently a dirty people. M. Cazenave is here, but MM. Bazin and Hardy, the representatives of the new school, are most popular, and are now the authorities in Paris for diseases of the skin. They divide all skin diseases into three great classes, scrofulous, syphilitic, and dartres, or those not belonging to either of the two former; there are still the parasitic. Though it may have the advantage of being more scientific and more pathological than the old arrangement, it is still very arbitrary, as, for instance, calling an eruption syphilitic merely because a man has had syphilis at some period of his life; the word scrofula, too, is a very general term, and often a very convenient one; and, moreover, the old classification has the advantage of being very simple and very useful. M. Hardy's classification is, I believe, a modification of the one usually received in Paris.

Baths are the great remedy here, and I would recommend any visitor to visit them, permission being readily granted by the Director; vapour, hot-air, cold and hot water baths, douches, sulphur and other medicated baths are all collected together in one building, which was erected at a cost of £24,000, and between four and five hundred baths are given every day. The wards contain many interesting cases, but the out-patients' department is the most interesting, and is, I must confess, at the same time most amusing, for there is a very large number of patients and a very short time to see them in. One morning when I took statistics there were 230 men and women seen in one hour and three-quarters; of these perhaps ten had medicine or ointment without baths, and perhaps as many more, chiefly syphilitic, had medicine with baths, but all the others had baths or douches alone. Some few cases, not of skin disease, creep in and receive the same treatment; one complains of pain in the back or side, another of sciatica, and, without any time being lost to inquire into the cause of the pain, six warm baths or six fumigations are ordered. One day a cachectic-looking woman came and complained of having a pain in the stomach and back, and of feeling great weakness;—"Six fumigations! Allons, une autre!" and she made way for another. Leprosy does not appear to be uncommon, and besides one or two good cases amongst the out-patients, there is an excellent specimen inside. M. Bazin is giving chloride of platinum, and he says the man is decidedly better, but the patient himself says that there is no improvement. Amongst those 230 cases I dare say there were not less than forty of itch, for which there is a special treatment in the Hospital, consisting first of a simple bath, followed by a rubbing with soft soap, and being concluded by the application of an ointment of which sulphur is the chief ingredient; all the men are treated one day and the women the next. All the interesting and more severe cases are taken inside, and preparations of arsenic, potash, etc., are given, but still usually combined with baths.

OTHER HOSPITALS.

Besides the above four, there are other Hospitals equally deserving a visit. All are under the management of Government, and are kept up at the expense of the Government. There is but one School of Medicine, and the students are distributed as dressers to different Surgeons by competitive examination. They must go from one Hospital to another to see practice and attend clinical lectures, and also to see special practice, as venereal and ophthalmic diseases, stone and stricture cases, and diseases of the skin. It is true that they take these cases at the general Hospitals, but not in sufficient quantity to allow any one to learn their different forms and appearances.

The Midi is the venereal Hospital for men, and the Lourcine for women; the former contains 336 beds, and the latter 276. They are built much alike, with low, narrow wards, crowded with beds, which are placed about half a yard apart; they always appear to be filled, but generally the cases are slight. The speculum is much cultivated at the Lourcine, and was passed in every case the morning I was there; at the Midi the treatment seems to vary very much, but for gonorrhœa, copaiba and cubebs still retain their place, being supported by injections of nitrate of silver and tannin, and of sulphate of zinc and acetate of lead. In syphilis mercury appears to be thought necessary, but it is not given till secondary symptoms show themselves. To see these Hospitals a card of admittance is necessary; it is obtained at the central Bureau of the Assistance Publique on showing diploma or passport.

The Enfants Malades is an excellent place for studying diseases of children; it contains 700 beds. The wards are crowded with beds, but it is situated in an open, suburban district, and has pretty grounds attached to it, containing everything requisite for the amusement of children. In going round with M. Roger, I was struck with the number of croup cases where tracheotomy had been performed; from January 1 to the beginning of June he had had 28 cases of croup where tracheotomy had been performed; of these 8 were discharged well, 1 was soon to be sent out, and 2 were still under treatment, and of all the cases in the Hospital during the same period about one-third had been saved. The operation is not too long delayed, but performed directly the child shows any symptom of choking, and if an enetic fails to give relief; the medicines chiefly relied on seem to be perchloride of iron and chlorate of potash.

Adjoining this Hospital is the Necker, where Civiale has a few beds devoted to the treatment of stricture and the use of the lithotrite. He gives his clinique and operates every Saturday morning.

REVIEWS.

The Diagnosis and Treatment of Diseases of Women, including the Diagnosis of Pregnancy, founded on a Course of Lectures delivered at St. Mary's Hospital Medical School. By Graily Hewitt, M.D. Lond. London: Longman. 8vo. Pp. 628. 1863.

Although, in our opinion, Dr. G. Hewitt has not produced a first-class or standard work, yet he has written a good and useful book. Not very readable, oddly and inconveniently arranged, diffuse and verbose on some points, defective or altogether silent on others, there is still a solid groundwork of "good stuff," which will secure for the author an attentive perusal, some fair criticism, and a more or less general approbation. Without at all resembling the young gentleman in the song,—

> "Whose only books were woman's looks,"

—on the contrary, rather looking to books for the interpretation of woman's looks—Dr. Hewitt's book is very far from being a "mere compilation." Many of the chapters, indeed, are little more than a critical analysis by an intelligent and practical man of the writings and doings of others, with scarcely any addition from his own experience or observation. But here and there—a severe critic might say, perhaps, at long intervals—the reader will find, as he travels along the old and beaten track, some new point of view—some brighter light on the landscape—some stumbling-block cleared away—some new way to avoid a difficulty—some additional signposts to prevent mistakes—which will convince him that the author has really been over the ground himself, and that he is well qualified to serve as a trustworthy guide.

Dr. Hewitt has devoted a very large section of his work to diagnosis, a smaller portion to treatment; completely separating these two portions of his work. There may be some utility in this separation, but the inconvenience is obvious. A reader, for example, wishes to see what Dr. Hewitt has to say about fibroid tumours of the uterus. Instead of finding (as in Dr. West's work, for instance), a well-arranged and connected account of the characters and structure, relations and varieties, natural history and effects, diagnosis, prognosis, and treatment of these growths, in some forty continuous pages, the student must hunt up the scattered fragments of information from beginning, middle, and end of the work before us. At page 14 he will find the age at which fibroid tumours occur, and he must turn to page 63 for information respecting hæmorrhage due to this cause. The diagnosis by vaginal examination must be searched for at page 242, and by abdominal examination at page 355, and the diagnosis when they form in the posterior part of the uterus at page 203. An account of the transplantation of these growths is to be found at page 413, while the fibro-cystic variety is treated at pages 351 and 402, and for the treatment the reader must turn to a short chapter commencing at p. 564. This is but one among many instances of the inconvenience to the reader of the plan which the author has adopted in the arrangement of his work.

When we add that about 430 pages are devoted to diagnosis, and less than 200 to treatment, and that all the data to be obtained with and without physical examination are carefully considered in the first part, and that in the second part a great deal of information may be found on the treatment of amenorrhœa, menorrhagia, leucorrhœa, dysmenorrhœa, hysterical and other sympathetic affections; diseases of the external generative organs; inflammation, displacements, tumours, and cancer of the uterus; pelvic abscess and hæmatocele; and diseases of the ovary, we have given our readers a general idea of the nature of the work. To show that Dr. Hewitt has brought his book fully up to the state of knowledge of the day, we have only to say that in order to assist in discussions of the question of ovariotomy, now so warmly debated, he has procured returns from the principal operators up to the date of publication,—September, 1863. He gives a table, from which we extract the following facts, as they are certain to interest our readers. We limit our selection to the only British operators who have operated on more than twenty cases, because any smaller number must be open to accidental variations. For instance, Mr. Spencer Wells gave at one meeting of the Pathological Society a series of 12 cases, resulting in 7 deaths, and only 5 recoveries; and at a subsequent meeting, a series of 17 cases, with only one death, and 16 recoveries. It is evident, therefore, that it is useless to compare the results obtained by different methods or different operations, when only a small number of cases can be collected. But there are three of our countrymen who have each operated more than fifty times, who have each certain peculiarities in their mode of procedure, and whose results may therefore be compared with advantage. According to Dr. Hewitt (who states that he has obtained the returns from the operators themselves), up to September, 1863, Dr. Clay had operated on 107 patients, with a result of 73 cures, and 34 deaths; Mr. Spencer Wells had had 74 cases, with 49 cures, and 25 deaths; and Mr. Baker Brown had 58 cases, with 32 cures and 26 deaths. Disregarding fractions, the following may therefore be accepted as the general average per cent. of deaths and recoveries following ovariotomy when performed by our most experienced operators:—

	Recoveries. Per cent.	Deaths. Per cent.
Dr. Clay	69	31
Mr. Spencer Wells . .	67	33
Mr. Baker Brown . .	56	44

Perhaps the most singular result of this comparison is the fact that Dr. Clay and Mr. Spencer Wells, whose results are so nearly identical, follow a totally different method in the most important steps of the operation. Dr. Clay prefers the long incision, Mr. Wells the short. Dr. Clay leaves the tied pedicle within the abdomen, Mr. Wells keeps it out whenever he can. In uniting the wound, Dr. Clay does not include the peritoneum, Mr. Wells does. In the after treatment, Dr. Clay follows a starving, Mr. Wells a nourishing system. Yet with all these essential practical differences the result is nearly the same—slightly in favour of the man whose experience is the greatest. This question of personal experience cannot be overlooked, and we remember that it was the explanation offered by Mr. Wells himself in an interesting debate at the Obstetrical Society when Dr. Clay's paper was read. Admitting Dr. Clay's greater success, yet blaming his method, Mr. Wells suggested that a man of great experience might obtain better results, even though practising a faulty method, than a less experienced operator whose method was better in principle.

But we must not be led away from his book by the facts with which Dr. Hewitt has furnished us. That he has given us these facts is enough to prove that he has done his best to bring his book to the level of the science of the day. And this alone is good work, even though his own contributions to that science have not been very important as yet. But he has a fair field before him. He has raised his shoulders above the crowd;—for if he had done nothing else, as we said at starting, he has written a good and useful book.

It is fair to add that what makes the book inconvenient to an elderly reader may render the lectures on which it is based most excellent as instruments for training the young student, *e.g.*, the severely logical arrangement, the very minute discussion of physical diagnosis, and the careful weighing and sifting of each individual symptom. It is a real *grammar* of its subject, with something of the dryness and severity which every good grammar must possess.

Aperçu des Différentes Méthodes de Traitement Employés à l'Hôpital de l'Université de Christiania Contre la Syphilis Constitutionelle. Par J. L. Bidenkap, Médecin de Reserve de l'Hôpital. 8vo. Pp. 53. Christiania.

This is a very important memoir on the treatment of syphilis by "syphilization," "derivation," and "sweating." It consists of a series of cases arranged in tabular form—318 under the former treatment, 164 under the second, and 28 under the third.

From the compiler's preliminary remarks it appears that during the last ten years the treatment of syphilis has been entirely changed in the Christiania Hospital. Before that date mercury and iodine were employed as specifics, and, speaking generally, in all cases. The use of mercurials has since then steadily diminished, and during the last two years has entirely ceased, while iodide of potash is still employed in some cases. The beginning of the change dates from the introduction, eleven years ago, of syphilisation, first experimentally, and then as a general mode of cure. Its increasing success, and the permanent recoveries obtained by its means, led to its being adopted by other members of the staff, besides its originator, M. Boeck.

Other non-mercurial treatments were, however, tried, particularly that of producing non-specific suppurating ulcers on different parts of the body, by means of antimonial applications. Experiments were also made on treatment by means of daily sweatings, assisted by decoction of sarsaparilla.

Syphilisation is performed by inoculating with matter taken latterly only from "infecting chancres," first on the sides of the thorax and abdomen, then on the arms, and lastly on the thighs. Six such punctures are made every three days, in symmetrical positions, the matter for each inoculation being always taken from its predecessor as long as it takes effect, a fresh supply being only used when the former has entirely lost its force. The original matter can usually be employed for fifteen to twenty crops of sores, but varies somewhat in different individuals.

After persevering for an average period of three months in this process, a point is reached where any kind of matter fails to produce specific effects. This crisis may occur sooner, or may be delayed as long as six months from disturbing causes. When it has occurred, the treatment ceases, and the artificial ulcers are allowed to heal before the patient is discharged. It is stated to be rare for any syphilitic symptoms to persist; when they do, they yield to simple local treatment, especially by nitrate of silver.

Suppurating bubo is said rarely to follow the inoculation, as already noticed by M. Ricord. Indurated glands, however, are not uncommon. The artificial ulcers are not usually indurated. They are larger and more easily excited on the arms and thighs than on the trunk.

In rare cases of relapse re-inoculation has been tried, but generally without effect.

Derivation consists in applying a small antimonial plaster between the shoulders. In a few days vesicles and pustules are developed under it; these are, after a time, allowed to heal; the same process is then repeated on the arms, and lastly on the thighs. Three weeks are usually allowed to elapse between each application.

Sudorific treatment consists in giving the patient twenty-four ounces daily of decoction of sarsaparilla, half to be drunk warm in the morning, while he is packed in blankets, and the rest during the remainder of the day. Laxatives and local applications are the only other medication.

The writer of the memoir very judiciously remarks upon the triviality of the two latter methods, and tabulates the cases referred to principally as evidences of the possibility of curing secondary symptoms by general hygienic measures, and by encouraging their harmless elimination. The former treatment, however, stands on a totally different basis; and, whatever may be its merits or demerits on the ground of convenience and security, it undoubtedly offers an interesting subject of pathological study.

Of the 318 cases recorded, twenty-one died. Only two of these were adults, both apparently females, although rather strangely the sex is not given in the bulk of the cases; one was 50 years old, and is stated to have died of "diphtheritic ulceration of the intestinal canal." The other, aged 23, was delivered of a dead child, and carried off by puerperal fever; the remaining nineteen were all infants, one, aged 1 year 9 months, dying of croup, the rest, all under 3 months, weakly children with hereditary syphilis.

The duration of treatment is stated by the writer as follows:

Mean duration of treatment by

	Days.
Syphilisation	134
Derivation	156 35
Sweating	148

Relapses occurred after syphilisation in 10 per cent.; after derivation in 23 per cent.; after sweating in 39 per cent.

Duration of treatment of relapses after

	Days.
Syphilisation	79
Derivation	128
Sweating	144

Total duration of diseases and relapses by

	Days.
Syphilisation	141·8
Derivation	180·26
Sweating	193·14

Seven of the earlier cases appear to have taken iodide of potassium, the rest merely used local treatment.

On the Influence of Weather upon Disease and Mortality. By R. E. Scoresby-Jackson, M.D., F.R.S.E. Edinburgh: Neill and Co. 1863.

This work, a quarto volume of fifty pages, followed by some elaborate statistical tables, and several coloured meteorological diagrams, is extracted from the *Transactions of the Royal Society of Edinburgh.* Any such contribution to science by the author of "Medical Climatology" may naturally be expected to present the highest accuracy and value. The introductory remarks show a due appreciation of the exceeding vagueness popularly attached to the influence of weather. "People believe that the weather affects them. They speak of its influence, sometimes commendingly, more frequently with censure, on the most trivial occasions; but beyond a few commonplace ideas, the result of careless observation, or perhaps acquired only traditionally, they seldom seek a closer acquaintance with the subject. Our language teems with Medico-meteorological apophthegms, but they are notoriously vague; as a matter of purely Medical inquiry, the influence of the weather is too frequently neglected."

The various co-efficients of weather are considered in the order of temperature, humidity, atmospheric pressure, and wind. These are first compared with the mortality from all causes, then with that from special causes, such as the so-called "zymotic" class, phthisis, bronchitis, and the modification due to age.

All subjects treated of in the paper are summed up in a general *resumé*, which, though too long for extraction in our columns, will amply repay a careful study. General and zymotic mortality seem to hold an *inverse* relation to temperature below 50°, and *direct* to it above that degree. Phthisis rises in mortality *slightly* with a low winter temperature, "but only to a remarkable extent when the mean is very low, and continuously so." A high summer temperature does not increase the fatality of phthisis. Bronchitis, on the other hand, preserves an *inverse* ratio all the year,—most marked in winter.

The relations of mean barometric pressure and drought and humidity to the mortality considered under similar categories bring the paper to a close.

The importance of this and like contributions to our knowledge can hardly be over-estimated; especially when, as in the present instance, they bear the stamp of authenticity. One of the most hopeful aspects of modern science is the progressive winning of subject after subject out of the vague domain of "Vital Causes" into the more accurate region of Physics and Physiology.

GENERAL CORRESPONDENCE.

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THE ASPHYXIA OR APNŒA OF THE DROWNED.

Letter from Mr. Charles Hunter.

[To the Editor of the Medical Times and Gazette.]

Sir,—In my last letter I pointed out that at the present time the Royal National Life-Boat Institution and the Royal Humane Society profess to act upon the same physiological principle in the treatment of the drowned. The *restoration of breathing* is now the first aim with both Societies; but their rules differ as to the position of the patient, and the performance of artificial respiration.

These points of difference are so important that they require especial study.

Let the cause, the object, and the aim of treatment be constantly borne in mind; the cause—water; the object—man rendered insensible and breathless from submersion; the aim—the restoration of his breathing; and the value of the Marshall Hall method will then be rendered manifest.

Let me start with the proposition:—That of the two methods now before us for choice, the Marshall Hall method is by far the best; and especially for the apnœa of the drowned. And let me give my reasons for thinking so:—

1. That the method was founded upon many experiments made upon many bodies.
2. That it is able to produce ample respiration for the purposes of life.
3. That its efficiency has been amply testified to by the numbers of Medical men who have tried it.
4. That the experiments made by the Committee of the Medical and Chirurgical Society upon the dead body have not yet been sufficient in number to decide against a method established by a much greater number.
5. That the Silvester method is deficient in one or two of the chief advantages possessed by the Marshall Hall method.

Not to go into detail on these points, on which the majority of the Profession have no doubt already formed their opinion, let me draw attention to one important feature of difference in the Rules of the two Societies, one that to me constitutes an undoubted advantage in favour of the Marshall Hall method, one that meets—or that obviates if adopted—a grave element of danger in the drowned, which element of danger seems to be overlooked and unprovided for by the advocates for the Rules of the Humane Society.

This feature of difference is the *pronation of the body*. In the Marshall Hall method it is first used to clear the air-passages, and subsequently as a part of the "life-giving process," artificial respiration.

The Humane Society ignore pronation. They direct you to *clear the throat* as follows:—"Cleanse the mouth and nostrils, open the mouth, draw forward the patient's tongue, and keep it forward; an elastic band over the tongue and under the chin will answer this purpose."

These are the directions to the by-stander, who, in all probability, will not be a Medical man, and who is not likely to have an india-rubber band with him; and if not, how is he to keep the tongue out? and how, moreover, is he to draw the tongue, swollen and slippery, out beyond the teeth? This is one little objection at starting to the Silvester method—a fair one—as all this difficulty can be so easily obviated by the *pronation* of the body.

But the great importance of this pronation has yet to be seen. In the drowned we have two evils to remedy—the absence of air, and the presence of water in the lungs. It is an undoubted fact that water may be, and is, drawn into the lungs in the attempts at inspiration. This water may cause death. The Committee of the Royal Medical and Chirurgical Society showed that even plaster of Paris and mercury were drawn into the lungs in the attempts of animals to inspire, and that animals drowned died sooner than otherwise asphyxiated. My own experiments, published in 1861, showed the presence of water in the lungs of drowned animals.

How important, therefore, to get rid of this fluid! The rules of the Humane Society enjoin nothing for the removal of this great evil—this source of death. Pronation, on the other hand, *favours* its removal; artificial respiration, with pronation, *effects* its removal. Each pronation effects expiration, and so effects it that the tongue drops forward, and fluid can pass from the trachea *at the same time*.

That the expiratory act is made to precede the inspiratory, in the Marshall Hall method, is objected to by the advocates for the opposite plan. They object to an advantage. For the turning of the body on the face, with slight pressure on the back, besides opening the glottis, and permitting the exit of the impure air, *lets the fluid run out* that had entered the trachea; and it is a fact that artificial respiration may be kept up for half an hour by this method upon a drowned body, and fluid be expelled from the lungs with each pronation.

Look now at the plan of the Humane Society, that makes no provision for this cause of death. See the result of keeping a patient with much fluid in the lungs upon the back, and in that position performing artificial respiration.

With each act of induced inspiration the fluid in the lungs is drawn further into them, and the fluid in the trachea into the lower bronchi; some air is also drawn in, but full oxygenation of the blood cannot be effected, and although the patient may inhale sufficient air to live for a few hours, he will die "cold and blue," and yet perhaps with a good pulse. He dies from the circulation of carbonised blood in the system, and he dies the sooner when this supine artificial respiration has been made with the addition of much heat—as by the heated chamber, the warm bath, or too much clothing, for these stimulate the circulation.

I will not venture to intrude further on your valuable columns, and must therefore leave the consideration of the other disadvantages of the rules of the Humane Society for another occasion. I am, &c.

Charles Hunter.

Wilton-place, Belgrave-square, October 19.

Letter from Mr. Richard Ellis.

[To the Editor of the Medical Times and Gazette.]

Sir,—This important subject coming again before the Profession, by the circular of the National Life-Boat Association and your own review of Dr. Silvester's work, has induced me, being one among the first of those who put the "Ready Method" of Dr. Marshall Hall to the test of practical experience in this country, with your permission to offer two or three remarks upon the matter, which I do with some diffidence, remembering it has been already discussed by so many distinguished and eminent members of our Profession.

Firstly, I have never tried Dr. Silvester's plan, simply because the "Ready Method" has never failed in my hands. I have tried it in two bad cases of asphyxia from drowning already published, and in numerous instances in new-born infants.

Secondly, I cannot agree with those who condemn the "Ready Method" because of the probable injuries likely to be received by the patient in the rolling of the body. It should be recollected that Dr. Marshall Hall's directions are,—*vide* work on Drowning, page 31,—when speaking of the postural measures,—"Let these measures be repeated gently, deliberately, but efficiently and perseveringly." And I contend that if Dr. Marshall Hall's directions are remembered and faithfully carried out, that the body cannot in any way receive injury.

Thirdly, I quite agree with the reviewer of Dr. Silvester's work, that the "Ready Method" is fatiguing to the operator, especially when carried out with the energy necessary to success; and should he meet with a case requiring its continuance for thirty or forty minutes, he is not likely to meet with any case more fatiguing in the practice of his Profession; but, on the other hand, should such inconvenience, when the object in view is the preservation of human life, be allowed to weigh for one moment against the adoption of a mode of treatment so original and effective as that of Dr. Marshall Hall's? I am, &c.

Richard Ellis, L.R.C.P. Edin. exam.

Hinde-street, Newcastle-on-Tyne.

Mr. Henry Spicer, secretary of the Nichol-street Ragged Schools, has published two facts illustrative of the condition of Bethnal-green:—"In 1855, out of an infant-class of 160, sixty children died in the course of a month of destitution and the resulting diseases. During the famine of 1860 more than 200 families were daily relieved, and more than once children have been brought into the school to die beside the schoolroom fires, as their parents were unable to afford them that luxury at home."—*The Guardian*, Oct. 28.

REPORTS OF SOCIETIES.

HARVEIAN SOCIETY OF LONDON.

October 15, 1863.

Dr. Henry Fuller, President, in the Chair.

Mr. J. Z. Laurence, F.R.C.S., exhibited his recently invented

REFLECTING OPHTHALMOSCOPE.

Mr. Laurence first showed on the eye of a rabbit that the luminosity of the fundus oculi may be readily observed by interposing a sheet of plate-glass between the eye and a lamp flame. An observer regarding the surface of the glass at the proper angle sees the illuminated pupil. It was then shown that the aerial image formed in the focus of a convex lens may be at once rendered obvious by its reflection from a plate of glass placed beyond the focus of the lens. In this way Mr. Laurence succeeded in demonstrating the optic nerve, retinal, and choroidal vessels of the rabbit's eye by the reflection from a sheet of glass of their real image formed by a convex lens (of two or three inches focus). An ophthalmoscope on this principle consists, then, simply of two parts—(1) of a convex lens, and (2) a plate of glass. In this way Mr. Laurence stated he had observed the minutest details of the human fundus oculi; but, at the same time, he wished to impress on the members of the Society that he had only succeeded in establishing the principle of his instrument, there remaining much to be done in the details of its construction before it would become one of general practical utility. Mr. Laurence then exhibited in a patient a very striking instance of pulsation in the retinal veins, of which, in a less degree, he stated he had latterly observed several other instances since his attention had more especially been directed to the point. With regard to the "reflecting ophthalmoscope," Mr. Laurence stated that it possesses also autophthalmoscopic properties. In the autophthalmoscope of Coccius, also, the perforated mirror might be advantageously replaced by a disc of plate glass.

The thanks of the meeting having been moved to Mr. Laurence for his valuable paper, the President announced that the next meeting of the Society will take place on November 5, when Mr. Ernest Hart will read a paper "On the Diseases constituting the Condition commonly called Amaurosis."

ABERNETHIAN SOCIETY, ST. BARTHOLOMEW'S HOSPITAL.

Thursday, October 15.

Mr. Lanchester, President, in the Chair.

Dr. Andrew read a paper on

FATTY DEGENERATION.

After distinguishing between fatty growths, fatty infiltration, and fatty degeneration, and mentioning the principal conditions under which this latter takes place, viz., in connexion with old age, hypertrophies, morbid structures, and inflammations, the author advanced the two following propositions, viz.:—1. That interference with the circulation is of itself sufficient to produce fatty degeneration. 2. That when other causes are also at work, it is this one which determines the seat, and in great measure regulates the amount and degree of the degeneration. In proof of the first, reference was made to the facts adduced by Dr. Quain (*Med. Chir. Trans.*, vol. xxxiii.) and Mr. Paget ("Lectures on Surgical Pathology"). The second was shown to be supported by, and at the same time to afford a satisfactory explanation of, such a form of contracted kidney as is figured by Dr. Bright in his "Select Reports of Medical Cases," pl. iii., fig. 2. Dr. Andrew argued that here a previous state of enlargement had been succeeded by unequal but not irregular atrophy; the peripheral portions of the organ, those, viz., at the greatest distance from the hilus, and whose blood supply must consequently have been most interfered with by the pressure of the distended tubules upon the vessels, being precisely those which had undergone the greatest amount of atrophy and degeneration. The same thing was shown by the appearances in the liver in cases of cirrhosis of the so-called nutmeg liver, and of occlusion of the portal vein.

In the discussion which followed it was urged that too much stress should not be laid upon local conditions tending to fatty degeneration, to the neglect of the more obscure, but perhaps not less active general causes which may be at work.

Illustrating this, Mr. Lush mentioned two instances which had come under his observation, in each of which all the boys of the family on arriving at the age of puberty wasted and died through fatty degeneration of all their muscles. All the girls and parents were quite exempt from the disease. These cases afford striking examples of the constitutional tendency to the affection.

MEDICAL NEWS.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, October 22, 1863:—

Montague Frederic Evershed, Billinghurst, Sussex; Charles Frederick Knight, Brill, near Thame, Oxon; Thomas Samuel Barrow, 4, Halsey-terrace, S.W.; Selby Mars Morton, 25, Haverstock-hill, N.W.; George Herbert Clifton, Burwell, Cambs.; Arthur Evershed, Guy's Hospital; Thomas Lucas, Burwell, Cambs.; Joseph Smith, York.

The following gentleman also on the same day passed his Examination as an Assistant:—

George Robert Gowland, Sunderland.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Drosier, William H., M.D. Cantab., has been appointed one of the Examiners for the first Examination of B.M. in the University of Cambridge.

Fawcett, F. M., M.R.C.S. Eng., has been elected House-Surgeon and Secretary to the Scarborough Dispensary.

Goodwin, John W., M.D. Cantab., has been appointed an Examiner of the Candidates for Medical Degrees in the University of Cambridge.

Henderson, William, M.D. Edin., has been appointed one of the Examiners in Medicine in the University of Aberdeen.

Humphry, George M., M.D. Cantab., has been appointed one of the Examiners for the Second Examination for the Degree of B.M. in the University of Cambridge.

Johnston, W. W., M.D., has been elected Physician to the North London Consumption Hospital.

Leadam, W. Ward, M.D. Edin., has been appointed Medical Officer and Public Vaccinator to the Iver District of the Eton Union.

Lestourgen, Charles, F.R.C.S. Eng., has been appointed one of the Examiners for the Second Examination for the Degree of M.C. in the University of Cambridge.

McGill, Andrew, M.D. Glasg., has been elected Physician to the North London Consumption Hospital.

Paget, George E., M.D. Cantab., has been appointed one of the Examiners for the First Examination for the Degree of B.M. in the University of Cambridge.

Williamson, William, M.D. Edin., has been appointed one of the Examiners in Medicine in the University of Aberdeen.

DEATHS.

Braybrooke, William, M.R.C.S. Eng., Staff Surgeon-Major, at Woolwich, on October 23, aged 47.

Carr, George, M.D. Aberd., at Union place, Aberdeen, on October 17.

Chavasse, Charles A., F.R.C.S. Eng., at Smethwick, Birmingham, on October 16.

Greenfield, William, M.D., Q.U.I., at Holywood, Belfast, on October 7.

Hale, Frederick H., F.R.C.S. Eng., at Guernsey, on September 14.

Lidderdale, John, M.D. St. And., at Kintbury, Berks, on October 22, aged 61.

McMillan, John, M.D., at Acomb, York, on October 8, aged 71.

Olive, George, M.R.C.S. Eng., at Sheep-street, Northampton, on October 16, aged 59.

Rumney, James, L.R.C.S. Edin., at Bennet Head, Ullswater, Cumberland, on October 6, aged 84.

Scot, William, at Craigmuie, Kirkcudbright, N.B., on October 21, late Superintending Surgeon on the Madras Establishment, H.E.I.C.S.

Sheppard, W. M., M.R.C.S. Eng., at Geelong, Australia, on September 16, aged 38.

Wilmans, A. A., M.D., at Colesberg, Cape of Good Hope, on September 3, aged 37.

Society for Relief of Widows and Orphans of Medical Men in London and its Vicinity.—Mr. C. J. F. Renton has been appointed Collector to this Society, in the room of Mr. Cheshire, resigned.

University of Cambridge.—The Examination for the Degree of Master in Surgery will commence on Monday, November 23. Gentlemen, candidates for the degree, are requested to send the necessary certificates to the Regius Professor of Physic on or before November 9.

University of London.—The Council of this University have given notice that the examination for the degree of Bachelor of Medicine will commence on Monday next, the 2nd of November, and terminate on Monday, the 9th. The examination for honours will commence on November 11. For the degree of Doctor of Medicine the examination will commence on Monday, November 23.

Fitting Expressions of Thankfulness.—On Tuesday, October 25, there were thanksgiving services in Westminster Abbey for the abundant harvest. Collections were made in aid of the Westminster Hospital and Dispensary. The proceeds of the thanksgiving services in Surrey have been devoted to the funds of the New Surrey County Hospital.

Hydrophobia.—A fatal case of hydrophobia is reported in the *Times* of October 24 as having been treated at the Royal Infirmary, Liverpool. The patient, it is stated, at first denied having been bitten by a dog, but afterwards admitted that he had been bitten seven years before.

The working men of Weston-super-Mare are on the point of establishing a village Hospital. The movement originated with one of their number, and upwards of £160 have been collected for the purpose in pence alone.

Homicidal Insanity.—Sarah Emily Mitchell, aged 24, charged with the murder of her illegitimate child, was tried on October 28, at the Central Criminal Court, and acquitted on the ground of insanity. It will be remembered that she attempted her own life after committing the murder. The Medical evidence of Mr. Cathrow, Mr. W. J. Byam, and Dr. Thorne completely convinced both judge and jury that the prisoner, at the time of the murder, was not responsible for her actions.

Ellen Smith, sixteen years of age, died on Thursday last from the effects of chloroform, administered by Mr. Gay, of 10, Finsbury-place. The chloroform was administered at the request of the deceased, who was desirous of undergoing an operation. Everything necessary was done for the patient's safety, except that her pulse was not continually kept in the hand of Mr. Worley, Surgeon, of Hoxton, while he was administering the chloroform under Mr. Gay's superintendence. After a long consultation, however, the jury, at the inquest, returned a verdict "that Ellen Smith died from the effects of chloroform, and that there was no blame attached to the Medical men."

Effects of Good Drainage and Water.—It appears that for the quarter just ended the rate of mortality in Salisbury has been extraordinarily low, the deaths out of a population of over 9000 having been only 20, while the average number of deaths in the corresponding quarter for many years previous to the introduction of a proper system of drainage and waterworks was 50, and since these works, for the last eight years, the average has been 37. The average annual number of deaths for the last eight years preceding the completion of the drainage (excluding the cholera year), was 243, or 27 in 1000, and for the same period since 193, or 21 in 1000, an actual reduction of almost one-fourth of the whole number. With just 50 deaths per annum less than usual during the last eight years, Salisbury is now looked upon as one of the very healthiest cities in the kingdom. If an equally low rate of mortality had prevailed in London during the last quarter, only about 450 persons would have died each week, instead of the numbers actually recorded—about 1250.

Bad Drainage.—An inquiry was held by Mr. Humphreys on Monday evening, at the Butler's Arms tavern, Bethnal-green, respecting the death of Julietta Ware, aged 12 years. Susannah Ware, 8, George-street, said that deceased was the third child who had died in that house within a fortnight. One child was now ill, feeble, and almost paralysed, and another had been seized with illness, but had recovered immediately on being sent elsewhere. Her husband, a carpenter, was also attacked in the same way. They were first sick, then generally there was sore throat, and then fever. There was a very bad smell from a drain under the back parlour. In the night time the effluvium was particularly bad. She complained to the landlord, and he had the boards of the parlour taken up and examined the drain pipes, which she saw. The remedies never were of use long, and the landlord was quite at a "stand" to account for the smells. There was no illness in the family before they came to reside in the house. The deceased was attended first by Dr. Massingham and subsequently by Dr. Brotherton. She died on Friday. The coroner said that there was a serious loss of life, the cause of which it was of importance to discover. As the parish of Bethnal-green was at present greatly agitated, he thought it was better to secure the services of a Medical gentleman of standing unconnected with the parish to examine the premises and to make a post-mortem examination of the body of the deceased, so as to arrive at an unbiased judgment as to the real cause of the mortality in question. The professional gentleman to whom he had entrusted the matter was not then ready with his report, and the proceedings should therefore be adjourned. When the jury visited the house in question the smell was found to be overpowering. Other children are stated to have died in the immediate neighbourhood with the same symptoms.

The College List.—The annual list of the Fellows, Members, Licentiates in Midwifery, and of persons who have received the certificate of qualification in Dental Surgery of the Royal College of Surgeons of England, has just been published, of which the following analysis may prove interesting to our readers. It appears that the total number of Fellows, who, it will be remembered, have alone the privilege of electing the councillors of the College, amount to 1296. Of this number, 286 have undergone the examinations for the honour. The members amount to 13,900. The licentiates in midwifery make but a poor show, only 38 gentlemen having obtained the L.M. from the College of Surgeons during the past year; the total number amounts to 878. The number of persons who have obtained the certificate of qualification in Dental Surgery amounts to 192, being an increase of 58 over last year. The Council, which consists of 24, has only five life members surviving, viz., Messrs. Lawrence, Swan, Green, Arnott, and South, the remainder being elective members. Of the Court of Examiners, which consists of 10 members, including the President, Mr. F. Carpenter Skey, no less than six of these gentlemen have twice filled the President's chair, viz., Messrs. Lawrence, Green, Arnott, South, Hawkins, and Luke. The financial condition of the College is equally interesting. It appears that the receipts of the institution from Midsummer day, 1862 to 1863, amounted to £12,410 1s., or £1725 12s. less than those of the preceding year. The principal sources of income were from examinations for membership, which produced £9384 15s. The next largest amount is for rent of chambers, which yielded £678 11s. 6d. The Fellowship examinations produced £409 10s. The certificates of qualification in Dental Surgery realised £514 10s., and from the midwifery licence only £191 2s. was obtained. The disbursements amounted to £12,418 17s. 1d., being a reduction of £1871 10s. 5d. of the expenditure of the preceding year, and £8 16s. 1d. more than the receipts of this year. The most expensive portion of the establishment is what is termed the College department, including fees to Council, examinations for diploma of member, dental and midwifery boards, auditors, fellowship, diploma stamps, list of members, coal, salaries, wages, etc., which absorbed £7585 5s. The museum department, including catalogues, specimens, spirit, bottles, salaries, wages, etc., required £2324 18s. 3d. The library department is more moderate, and has been carried on at an expense of only £574 8s. 8d. for the purchase and binding of books, salaries, wages, etc. £1130 16s. 9d. is given for miscellaneous items, including taxes, insurance, pensions, etc. The balance remaining in the hands of the bankers at Midsummer day last amounted to £3081 1s. 4d.

University College, London.—The surviving founders of University College will remember the hearty co-operation which they met with in their project to create the University of London from several opulent merchants of India, and notably from Sir Jamsetjee Jejeebhoy, Framjee Cowasjee Bunnajee, Sudasew-Kaskinath Chutre, Rogay Mohummed Ulay, and others, of Bombay, who promptly enrolled themselves among the original subscribers for shares in the institution. It will now gratify them to find that the views with which these enlightened natives of India lent their support to the undertaking in its infancy have not been disappointed, but that they are sensible of having derived from it, in its maturity, the benefits which they had anticipated. For several years past—from the time when by means found or supplied by the late Earl of Auckland, Dwarkanauth Tagore, Sir Edward Ryan, and others, Dr. Goodeve brought over Sorjo Coomar Chuckerbutty (now Dr. Chuckerbutty, one of the professors in the College at Calcutta), Bholanoth Bose, and their two fellow-students, and provided for them a course of British academical education,—the College, in one or other of its faculties or in its junior department, has had a constant succession of students from the Presidencies, mostly Parsees. Of the estimation in which intelligent and distinguished Indians hold the advantages which their young countrymen have thus enjoyed, a pleasing and very substantial proof has just been afforded to the authorities of the College, by the munificent gift of £1000 for the Hospital, and by the terms of a letter addressed to Dr. Walshe, Emeritus Professor of the Principles and Practice of Medicine, and forwarded to him for communication to the Council, from the eminent firm of Cama and Co., as follows:—"London, Oct. 20.—Dear Sir,—Referring to the conversation we had with you, we now beg to enclose a check for £1000, as a donation to the University College Hospital, in gratitude for the instructions and assistance received by our countrymen in this excellent institution, and we feel it a pleasure to give this amount through you, in token of friendship, and successful studies of our countrymen under your former professorship. We remain, dear Sir, yours faithfully, Cama and Co.—W. H. Walshe, Esq., 37, Queen Anne-street."

St. Bartholomew's Hospital.—The Governors of St. Bartholomew's are threatened with a lawsuit by the Corporation of the City of London to decide whether any but an alderman of the City who occupies or has passed the civic chair can hold the office of President. The question affects the presidency of all the Royal Hospitals in the government of which the Corporation takes part. For more than 300 years a civic magnate was elected president of each of the four Royal Hospitals, until in 1854 the custom was broken by the election of the Duke of Cambridge to the presidency of the Blue-coat School. At the last election at St. Bartholomew's the Lord Mayor was passed over in favour of Mr. Cubitt, who at that time had resigned his office as alderman. The Corporation ground their right on the fact that King Henry VIII. in 1546 vested the Hospital of St. Bartholomew in the mayor, commonalty, and citizens of London, and their successors, for ever, in consideration of a payment by them of 500 marks a-year towards its maintenance, and with it the nomination and appointment of all the officers. In September, 1557, at a general court of the governors of all the Hospitals, it was ordered that St. Bartholomew's should henceforth be united to the rest of the Hospitals, and be made one body with them, and on the following day ordinances were made by the Corporation for the general government of all the Hospitals, by the first of which it was declared that an alderman who had filled the chair of the mayoralty should be president of each Hospital. Disputes having arisen between the donation governors, who in later times had been admitted into the management, an agreement was entered into between the Hospitals and the Corporation in 1782, which was subsequently confirmed by Act of Parliament, letting in the donation governors to appoint, with those of the Corporation, the presidents, treasurers, and all other officers. The Corporation contend that although in 1782 the mode of electing the governors of the Hospitals and the manner of their election were changed, yet when elected they were to exercise their rights and privileges as the governors of the Hospitals theretofore had done, so that in the case of the president the electing body was to some extent interfered with, but nothing in the agreement varied the persons from whom they were to choose him. If, they say, the ordinances of 1557 were lawfully made by the Corporation of London in exercise of the powers granted to them by Henry VIII. and Edward VI., the governors of St. Bartholomew's Hospital would be bound to choose as their president "an alderman who had filled the chair of the mayoralty." They argue from the circumstance that since 1549 downwards none but an alderman has, until the last election, been chosen president of St. Bartholomew's, that the practice would seem so far to confirm the right of the Corporation to have an alderman who had passed the chair elected president in pursuance of the ordinances. The Privileges Committee of the Court of Aldermen instructed the City Solicitor to take the opinion of counsel as to the validity of the last election, and a case having been laid before Sir Fitzroy Kelly, Sir Hugh Cairns, the Recorder, Mr. Bovill, and the Common Serjeant, they gave an unqualified opinion that the election of Mr. Cubitt was not valid, he not having been an alderman of London at the time of his election, and that the question of the validity of the election should be raised by moving for a writ of *quo warranto*. A point is made on the part of the Corporation that the 500 marks a-year which they bound themselves to pay in 1546 have been regularly paid to the present time, and that sums of money amounting in the aggregate to £153,229 have been contributed by them towards the support of the Royal Hospitals, besides the profit for many years of Blackwell-hall market and most valuable leases, at nominal rents, of Corporation property, for very long terms of years. Probably the grants of land are of much greater consideration than the money contributions, for the £153,000 spread over 300 years and upwards would be little more than £500 a-year, and there are at least four Royal Hospitals which would share in the bounty of the Corporation.

With reference to the late squabble at Melbourne, which arose out of Professor Halford's zeal for orthodoxy, the *Melbourne Argus* says:—"The theory of Huxley is, that there is less difference between man and the gorilla than between the gorilla and the lower kind of monkeys; that man has no right to arrogate to himself a special exclusive place in the scale of creation, and that the difference between him and the next lower animal is one of degree only, and not of kind. One among the proofs advanced by Professor Huxley in support of his theory is, that the foot of the gorilla does not differ from the foot of man in any fundamental character, but that it differs only in proportions, and in 'the secondary arrangement of its parts.' Professor Halford's attempt to show that the foot of the gorilla is not exactly that of a man is thus a waste of labour. No one has asserted that the two things are the same—the argument is, that they are similar. If the lower extremities of the gorilla were perfect feet, he would be, not an anthropoid, but a man. But allowing everything that Professor Halford says—admitting that there are some differences between the foot of man and the foot of the highest ape, this does not affect Professor Huxley's position. It is absolutely incredible that Professor Halford should have discovered anything in the foot of the ape in Melbourne which was not known to Owen and to others of Professor Huxley's opponents in London, even if we can suppose that Professor Huxley himself was ignorant on this point. It is not necessary, however, for the Huxleian theory that the foot of the ape should exactly coincide with that of the man; it is sufficient for his theory that they are similar. If the monkey is shown to have even an imperfect and rudimentary foot, it is enough to constitute him a link in the progressive scale of creation. The present question does not involve any question of religion. The Christian may reasonably believe that the book given to him for moral instruction was not intended as a compendium of physical science, nor meant to preclude the workings of man's reason. There is no reason why any man's faith should be disturbed, even although the monkey's foot should be proved to be similar to that of man. The essence of the difference between the man and the monkey is not likely to be affected by any discoveries in the smaller pedal muscles. It is open for Professor Huxley to maintain, if he can, that there is no greater physical difference between man and the gorilla than between the gorilla and the howling monkey of South America. The fact, if proved—and we have no intention of saying whether it is proved or not—could not shake our faith in man, or exalt in any sensible degree our opinion of the monkey. Our place in nature would be the same, whatever becomes of our *peronæus longus*. 'I feel so sure,' says Sydney Smith, 'that the blue ape without a tail will never rival us in poetry, painting, or music, that I see no reason whatever that justice may not be done to the few fragments of soul, and tatters of understanding which he may really possess.'"

Death from Starvation.—The following instance of parochial neglect appeared in the *Times* of Tuesday last:—"Yesterday, Mr. Humphreys resumed an inquest at the Champion Tavern, Hackney-road, upon the body of Mrs. Caroline James, aged 42 years. The deceased was stated to have been a person of wealthy connexions, and the wife of a silk salesman, who has been, however, for six months in prison. She had nine children; the eldest was 18 and the youngest 2 years of age. Five of the girls earned from 8s. to 14s. a-week, and the son, who was 16, earned 12s., but he had mortgaged the whole of that sum to get £10 to stock a shop with confectionery. The rent of the shop, 37, Wellington-street, Bethnal-green, was 12s. a-week, paid weekly. The failure of the shop reduced the family to extreme want. The deceased was without food, and was greatly emaciated. On Sunday the neighbours got an order for the Parish Doctors to attend her, and the son of Dr. Moore, the District Medical Officer, attended, and advised her immediate removal to the Infirmary. Mr. Christey, the Relieving Officer, refused to do so, and said that he would take no orders from Mr. Moore, jun., as he was not the Parish Officer. Dr. Moore, on his return from his rounds, visited the woman, and gave the following order:—'Urgent.—17th October. I hereby certify that I have examined Caroline James, and found her in a delirious state, from privations and distress; and I advise that she should be immediately admitted into the Infirmary.—Signed, Edward Moore, Surgeon. To Messrs. Christey, Sadler, and Runciman, Relieving Officers, Bethnal-green Workhouse.' Mr. Sillett, salesman to a wine and spirit merchant, took that order to Mr. Christey, who abruptly said he would have nothing to do with the case, and when pressed for an answer, ordered Mr. Sillett out of the house, and upon his keeping his legs in the doorway in order to get an answer, kicked him. The deceased was taken to her mother's house, and died on the following Wednesday. Dr. Unthank Wallace said that deceased was greatly emaciated. Death resulted from consumption, accelerated by want of food and care. The stomach and intestines presented no trace or remains of food whatever. She could have had no solid food for days, and for months she must have been suffering from want. Dr. Moore also said that deceased had suffered from long and very severe starvation. Mr. Charles Christey, relieving officer, was then examined by Mr. Howard, solicitor, the clerk to the Board of Guardians. He said that he did not know deceased was other than a private patient of Mr. Moore, jun., when that gentleman's order was brought to him, and he did not attend to Dr. Moore's order subsequently, because he ascertained in the interim that the family were removing to Hackney parish, and that they had a vanload of goods. He then said, 'Well, let the good woman be taken wherever the goods are going to.' The Coroner said that it was proved that Mr. Christey was distinctly told that deceased was not a private patient, but a parish one, and, though Mr. Christey was given a certificate that deceased was delirious from privations, nothing was done for her from Saturday till Wednesday. The jury returned a verdict of 'Death from consumption, accelerated by want of food; and the jury find that great censure is due to the Relieving Officer of Bethnal-green.'"

Phosphates in Medicinal Decoctions and Infusions.—Some researches made by M. Terreil show that plants contain the phosphates in a soluble state. If we pour a slight excess of acid into a well-filtered infusion of mallow leaves, or into a decoction of taraxacum root, the sides of the glass will within twenty-four hours be found lined with ammoniaco-magnesian phosphate. All the phosphoric acid is not precipitated by this first deposit, and if we add to the filtered fluid sulphate of magnesia saturated by sal-ammoniac, a new deposit of the ammoniaco-magnesian phosphate occurs, and continues to increase. All vegetable solutions do not precipitate this phosphate when treated by ammonia, but they always do so when sulphate of magnesia saturated by sal-ammoniac is added. M. Terreil concludes from these facts that vegetable infusions and decoctions owe a portion of the action they exert on the economy to the phosphoric acid and phosphates they contain, the phosphate of lime of the bones proceeding from the soluble phosphates.—*Bull. de Thérap.*, vol. lxiv., p. 29.

Sulphuric Acid in Obstinate Vomiting.—A man had suffered a long time from vomiting, without paying much attention to it; but for about six months past he had rejected almost every solid article of food, so that he became much emaciated and enfeebled. Dr. Viglezzi, in spite of the most careful examination, being quite unable to discover the cause or the pathological conditions of this obstinate vomiting, determined to treat the case empirically. Having derived great advantage in analogous cases from the use of medicinal sulphuric acid, he ordered three drachms to be given in 500 of water every twenty-four hours during five days. The vomiting speedily ceased, notwithstanding that various articles of diet were taken, and on the ninth day the patient left the Hospital perfectly well.—*Omodei Annali*, vol. clxxxii., p. 445.

NOTES, QUERIES, AND REPLIES.

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He that questioneth much shall learn much.—*Bacon.*

Curiosities of the Census.—Much has been said respecting occupations open to women; the census has its disclosures upon that subject. The enumerators found in 1861 among the women of England 10 bankers, 7 money-lenders, 274 commercial clerks, 25 commercial travellers, 54 brokers, 38 merchants, 29 farriers, 419 printers, 3 shepherds, 43,964 outdoor agricultural labourers; 13 ladies were doctors, 2 were bone-setters, 6 were reporters or shorthand writers, 3 parish clerks, 4 choristers, 4 teachers of elocution, 17 dentists, 2 knackers, 4 conjurors, 1 astronomer, 8 "naturalists." Some of the other sex gave rather curious descriptions of themselves. Fifteen called themselves natural philosophers; one described himself as a lexicographer, another as a chronologist, and one wrote himself down "orator." Of others we have rather mysterious accounts—3 were glyphographers, 2 geometers, 9 kamptulicon manufacturers, 8 trufflers, 23 boat leggers, 15 peel makers, 29 mungo merchants, 12 beetle makers. It is a novelty in an English census volume to find 42 gold miners; and a wonder to learn that there still linger two toothpick makers. Among persons blind from their birth were found 4 town-criers, 3 ministers, and a scripture reader, a schoolmistress, 2 messengers or porters, 7 shoemakers, a tailor, 10 agricultural labourers, 3 laundresses, and 3 dressmakers. In the workhouse were a half-pay officer, a clergyman, 10 solicitors, 15 surgeons, an author, 68 schoolmasters, and 79 schoolmistresses. Not merely poor, but in prison for debt, were 12 officers in the army, 3 in the navy, 9 clergymen or ministers, 4 barristers, 32 solicitors, 2 physicians, 13 surgeons, 2 authors, 17 schoolmasters, 2 schoolmistresses, 10 "gentlemen." Still worse off, in lunatic asylums, there were 85 clergymen, 10 ministers, 103 half-pay officers, 22 barristers, 60 solicitors, 5 physicians, 61 surgeons, 3 authors, 54 schoolmasters, and 80 schoolmistresses.—*Times*, October 23.

Improved Health of the British Army.—In a letter to the *Times* of Saturday last, Dr. Franklyn, Surgeon to the first Battalion 10th Foot, calls attention to the change in the physical condition of the soldier brought about by the exertions of the late Lord Herbert, the late Mr. Alexander, Miss Nightingale, and Dr. Gibson. He gives the following statistics of the present and past mortality at the various foreign stations obtained from the "Army Medical Reports."

"Jamaica.—The mortality ran as high as 260 in 1000 of strength per annum, or a British regiment was entirely destroyed in about 3½ years. At a later period the mean of four healthy years gave in the same colony 67 deaths in 1000 of strength per annum. Up to 1855 it was as high as 60·8 per 1000 of strength; it is now reduced to 20·4 per 1000.

"Trinidad.—Here the mortality was 106·3 per 1000 of strength. A regiment was destroyed in seven years. In 1859, with an epidemic of yellow fever, it was reduced to 89 per 1000 of strength. In 1860 there was not a single death.

"Barbadoes.—The mortality here was 158·5 per 1000. A regiment was destroyed in 13 years. It is now 6·86 only per 1000.

"St. Lucia.—Mortality here was 122·8 per 1000. A regiment was destroyed in 6½ years. In 1859 not one death occurred; in 1860 one only occurred.

"British Guiana.—Here the mortality was 74 per 1000. A regiment was destroyed in 10 years. In 1859 it fell to 13·9 per 1000; in 1860 it went down to 6·6 per 1000.

"Canada.—Mortality here was 16·1 per 1000; it is now 10·1 per 1000 this including invalids who may die at home.

"Nova Scotia.—Mortality was 15·1 per 1000; now it is 7·23 per 1000.

"Newfoundland.—Mortality was 11 per 1000; it is now 4·8 per 1000.

"Bermuda.—Mortality was 28 per 1000; now it is 8·55 per 1000.

"Gibraltar.—Mortality was 11·1 per 1000; now it is 7·18 per 1000. Pulmonary diseases and fevers much reduced.

"Malta.—Mortality here was 18·2 per 1000 men, and sometimes went as high as 40·8 per 1000. Now it is reduced to 10·5 per 1000.

"Ionia.—Mortality was 15·5 per 1000; now it is only 7·08 per 1000.

"The Mauritius.—Here, by the new treatment of dysentery alone, the mortality from that disease has decreased to one-third, but cholera has been fatal for some time past, at intervals; 17 per 1000 is about the average mortality.

"Ceylon.—Diseases and mortality similar to those above, about 19 per 1000 of strength, everything included.

"India (Bengal).—Here the Medical Department has not been assisted sufficiently yet, nor have the changes recommended been carried out, but all is progressing slowly towards a better state of things. In Bengal, mortality has been 73·8 per 1000 (a regiment destroyed in 11 years); Bombay, mortality has been 50 per 1000; Madras, mortality has been 38·6 per 1000, or nearly twice as healthy as Bengal. The highest in Bengal was 96 per 1000 men; lowest ditto, 61 per 1000; the highest in Bombay was 80 per 1000 men; lowest ditto, 48 per 1000. The decline in the mortality in India is then chiefly due to superiority of treatment.

"Australia.—Mortality generally 11 to 14 per 1000 men.

"New Zealand.—Mortality 13 per 1000 men."

SURGICAL QUACKERY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Allow me, through the medium of your publication, to bring before the notice of the Profession two cases of impudent Surgical quackery existing in this neighbourhood, which certainly, if not put a stop to, will gain rapid ground, and throw great discredit on the science of Surgery; and I appeal to the Medical public generally for their hearty co-operation in eradicating this great evil I have to contend with. The first case I allude to will be understood by the following advertisement:—

"Regular Professional Attendance.—Mr. R. Hutton, Bone-setter, from

Milnthorpe, to sufferers from broken and dislocated bones, can be consulted Professionally at the Ship Inn, Barrow, first Monday of every month."

The other case is a man of the name of Dennison, who served, or is serving, his time now to a blacksmith in Penrith. I had a case some four weeks ago of fractured tibia and fibula; they sent for me. I being from home they sent for another Practitioner in town. Being dissatisfied with his mode of treatment, they at once re-sent for me, at the same time intimating that if I would not conduct the case they would, without delay, telegraph for Dennison, or Hutton, of Milnthorpe.

I am, &c.

Barrow-in-Furness, October 27. James Mitchell, Surgeon.

Beaney v. Fitzgerald.

A Didactic, Doggrel, Descriptive Dissertation.

(From the *Melbourne Punch*, August 6, 1863.)

Now you who've read the law reports
In *Argus*, *Age*, or *Herald*,
Take warning by the foolish ways
Of Beaney and Fitzgerald.

Fitzgerald, who, for rhyming sake,
We venture to call Fitz,
One day allowed his nimble tongue
To much outpace his wits.

For fear we should in libel form
For damages be cast,
We beg to say that Fitz's tongue
Must have been very fast.

However, Doctor Fitz, who might
Have been a vast deal wiser,
Fiercely attacked the Doctor B.
As just an "advertiser."

An advertiser being one
Who makes his calling known,
The Beaney keenly felt the slur
Upon his conduct thrown.

He might have graved his name upon
A massy brazen plate;
He might have hung his titles
On his door and on his gate.

He might from coloured lamps have flung
Some tinted rays of light,
To guide his anxious patients, and
To keep his house in sight.

But as to *advertising*—
And in the public papers!
He never had committed such
Discreditable capers.

He might have made his coachman sport
A heavy-gilded castor,
That gaping crowds might wond'ring ask,
Who was that great swell's master?

His carriage trappings he might have
With plating thickly peppered;
And lounge on woollen tiger skins,
Or imitation leopard.

But would he advertise in print,
His name, his worth, and station?
The bashful Beaney shuddered at
Such base insinuation.

On such a very tender place
This charge the Beaney hits,
hat, armed with legal terrors, he
Went in at Doctor Fitz.

In open court the Doctors met,
With anxious crowds to see,
If any jury could decide
Where Doctors disagree.

The case was heard, the judge summed up,
The substance of his summing,
When just reviewed and reckoned up,
To this conclusion coming:

'Twas for the jury there to say,
In light of common sense,
The damage done, and if it came
To shillings, pounds, or pence!

In saying which the learned chief
Somewhat pooh-poohed the matter,
Pounds, bobs, or pence—he rather seemed
To recommend the latter.

The jury then retired to think,
But doubts conflicting racked 'em;
The more they looked they couldn't see,
And so his Honour sacked 'em.

And Fitz has got to pay his costs
And Beaney his expenses;
And may the money that goes out
Just bring them to their senses.

If Dr. Fitz will guard his tongue
From paths to legal strife,
And Doctor Beaney never will
Again attempt *his life*,

The pair may think their quarrel has
Most fortunately ended,
And all the cash they pay for costs
As money well expended.

COMMUNICATIONS have been received from—

Dr. Devenish; Mr. J. A. Wilson; Mr. F. W. Richards; The University of Cambridge; The Western Medical and Surgical Society of London; Mr. C. Antonini; Iodide of Starch; Apothecaries' Hall; Dr. Richard Ellis; Mr. T. Stokes; Dr. J. E. Morgan; Obstetrical Society; Dr. H. Perry; Harveian Society of London; Epidemiological Society; Dr. W. Arding; Mr. John Taylor; Royal Institution of Great Britain; Dr. S. W. J. Merriman; Dr. James O. Grant; Mr. F. Le Gros Clark.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 24, 1863.

BIRTHS.

Births of Boys, 1003; Girls, 948; Total, 1951.
Average of 10 corresponding weeks, 1853-62, 1717·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	611	635	1246
Average of the ten years 1853–62	556·4	523·6	1080 0
Average corrected to increased population..	..	..	1188
Deaths of people above 90	..	6	6

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	2	3	18	1	6	6	2
North ..	618,210	13	2	30	3	5	9	5
Central ..	378,058	2	6	16	4	4	7	5
East	571,158	2	3	41	2	2	21	3
South ..	773,175	5	7	31	1	6	17	4
Total.. ..	2,803,989	24	21	136	11	23	60	19

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	9·982 in.
Mean temperature	52·5°
Highest point of thermometer	63·5
Lowest point of thermometer	34
Mean dew-point temperature	49·2
General direction of wind	S.W. & S.E.
Whole amount of rain in the week	0·03 in.

APPOINTMENTS FOR THE WEEK.

October 31. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

November 2. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

Epidemiological Society, 8 p.m. Dr. B W. Richardson, "On the present Position and Prospects of Epidemiological Science."

Medical Society of London, 8½ p.m. Mr. De Méric, "Occasional Non-transmission of Syphilis to the Offspring."

Royal Institution, 2 p.m. General Monthly Meeting.

3. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

Anthropological Society of London, 8 p.m. C. Carter Blake, Esq., F.G.S., "On the Anthropological Papers read at the British Association at Newcastle." Prof. J. Marshall, F.R.S., "On the Superficial Convolutions of a Microcephalic Brain." George E. Roberts and Prof. Busk, F.R.S., "On the Opening of a Cyst at Burghead." Capt. Eustace Jacob, "On the Indian Tribes of Vancouver's Island."

Pathological Society, 8 p.m. Meeting.

4. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

Hunterian Society, 8 p.m. Mr. Allingham, "On Two Cases of Stricture Treated by Perineal Section."

Obstetrical Society of London, 8 p.m. Mr. Hardey, "On Retroversion of Uterus." Dr. Braxton Hicks, "On his Method of Turning." Mr. J. B. Brown, "Vaginal Lithotomy."

5. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

Harveian Society, 8 p.m. Mr. Ernest Hart, "On the Diseases constituting the Condition commonly called Amaurosis, with Ophthalmoscopic Demonstrations."

6. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Meeting of the Council.

Western Medical and Surgical Society of London, 8 p.m. Practical Evening, for the Narration of Cases and the Exhibition of Specimens.

ORIGINAL LECTURES.

PROFESSOR HUXLEY'S LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

VI.—*The Skulls of Reptilia and Aves.*

The skulls of those abranchiate *Vertebrata* which do not suckle their young, and are oviparous, or ovo-viviparous, present certain peculiarities of construction in which they all agree with one another, and differ from the branchiate *Vertebrata* on the one hand, and from the *Mammalia* on the other.

Thus, the basi-occipital and the basisphenoid are always well developed, and the former furnishes a large part of the occipital condyle, which is single and central.

There is no parasphenoid, or median membrane bone, underlying the base of the skull.

The lower jaw, each ramus of which is composed of several pieces, articulates with the quadrate bone, as in the branchiate *Vertebrata;* but the quadrate bone articulates directly with the cranial wall, and is not separated from it by any structure representing the hyomandibular bone.

It may probably be added that the basisphenoid is formed by the union of three ossifications of cartilage—one superomedian and two infero-lateral (the basi-temporals of Mr. Parker), but further research is required before this generalisation can be regarded as firmly established.

The combination of peculiarities just mentioned at once characterises the skulls of Birds and Reptiles, and distinguishes them from all others.

In all these animals the basi-occipital bone gives attachment to a pair of ex-occipitals, which, again, articulate above with a distinct supra-occipital. The homology of these bones with those which have received similar names in the Man's and in the Pike's skull is not doubted; and, indeed, their relations to one another and to the exits of the eighth pair, are so similar as to allow of no discussion on this point.

Furthermore, the skulls of all Reptiles and Birds are roofed in by membrane bones, the correspondence of which with the parietals and frontals of Man is universally admitted; and, in all, there is a single or a double vomer, clearly identifiable with that of the Man and that of the Fish. So, again, there is no doubt about the homology of the premaxillæ and the maxillæ, the palatine and the pterygoid bones with the parts so named in Man. Nor is it questioned that the mandible and the hyoidean arch, in a general way, correspond with his. But there has been, and is, very great divergence of opinion as to the true nature of certain bones in the side walls of the skull, and of some of those which enter into the composition of the maxillary apparatus. I shall address myself chiefly to the discussion of these debatable ossifications.

The bone of most importance among these (the misinterpretation of which must needs, indeed, completely vitiate and render worthless any theory of the vertebrate skull) is that which lies in the side wall of the cranium, in front of the ex-occipital; while it is connected below with the basisphenoid, and above with the supra-occipital and parietal. In all Birds and Reptiles the relations of this bone are essentially such as are shown in the accompanying figures of sections of the skulls of an Ostrich, a Crocodile, and a Turtle (Fig. 41, A, B, C). In all these it will be observed that the aperture for the exit of the third division of the trigeminal (*V*) lies in front of a bone, which is notched, or perforated, by apertures for the *portio dura* and *portio mollis,* and that the anterior part of the organ of hearing is lodged within this bone. Furthermore, an external view of this region of the skull (Fig. 42, A and B) shows that the bone in question contributes the anterior half of the boundaries of the *fenestra ovalis.* In other words, the bone in question has every essential relation of that ossification which in Man and in the Pike I have termed *Pro-otic.*(a)

The other elements of the periotic capsule are not far to seek. In the Turtle one of them retains its independence

FIG. 41.

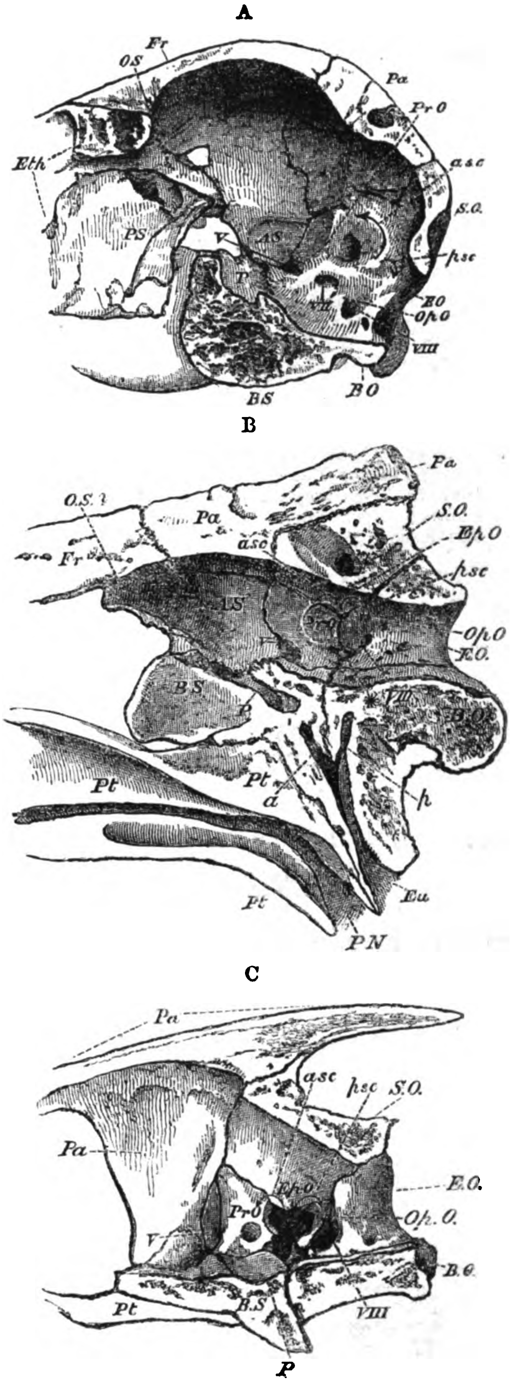


FIG. 41.—Vertical and longitudinal sections of the cranial chambers of (A) an ostrich (*Struthio camelus*), (B) a crocodile (*C. biporcatus*), and (C) a turtle (*Chelone midas*), to show the interior of the cranial cavity in each. In (B) * indicates the end of the cochlear plate of the opisthotic of the crocodile; *Eu*, the common Eustachian tube, with *a* and *p* its anterior and posterior affluents; *P N*, the posterior nares. The arrows denote the position of the anterior and posterior vertical semicircular canals. In all the figures *P* indicates the pituitary fossa.

(a) This is the bone called by Cuvier "rocher," and regarded by him and by most of the German anatomists as the homologue of the *pars petrosa* of the human temporal bone. I took the same view myself when I delivered the Croonian Lecture in 1858, and I do not now *substantially* depart from it. For that part of the *pars petrosa* which is most obvious and visible in the interior of the skull is its pro-otic portion, and so long as the complex nature of the *pars petrosa* was unknown, the identification of the bone *Pr.O* in the Bird and Reptile with the petrosal of the Mammal was the nearest approximation that could be made to the truth. Cuvier's identification would have been absolutely correct if he had termed the ornithic and reptilian bone not "petrosal," but "anterior part of the petrosal."

throughout life, and occupies a considerable space on the exterior of the skull, though, internally, only a small strip of it is seen in front of the foramen for the eighth pair. This bone furnishes the posterior half of the frame for the fenestra ovalis, and so much of that of the *fenestra rotunda* as is osseous, and it lodges the posterior and outer part of the auditory organ. It answers precisely, therefore, to the *opisthotic.*(b)

The corresponding ossification in most other Reptiles and in Birds early coalesces with the ex-occipital.

FIG. 42.

A

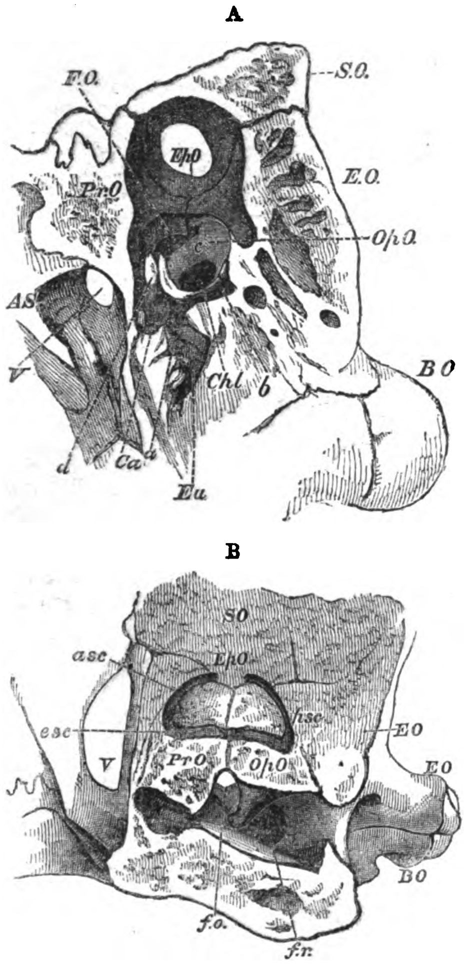


FIG. 42.—External view of the auditory region of the skull in, A, a Crocodile (*C. biporcatus*), and, B, a Turtle (*Chelone midas*). The walls of the tympanic cavity have been cut away in each case so far as is necessary to show the auditory *fenestræ;* and, in the Turtle's skull, the semicircular canals are also partially displayed. In the Crocodile's skull (A) *F.O* is the *fenestra ovalis*, separated by the cochlear process of the opisthotic, *c*, from the *fenestra rotunda;* *Chl* is the hook formed by the curved process (*b*) of the opisthotic, which supports the cochlea externally. The lower end of the cochlea rests in the fossa *a*, formed by the basisphenoid and basi-occipital. The upper end, bounded externally only by cartilage, has disappeared in the dry skull, and with it the outer lip of the *fenestra rotunda*, the plane of which is horizontal, and nearly on the level of the dotted line leading from *OpO* in the figure. *d* is a small process of the pro-otic, against which the bend of the curved cochlear process *b* rests. The dotted line from *b* indicates the position of the suture between the hinder end of that process and the remainder of the opisthotic bone. *Ca*, the carotid canal; *Eu*, the upper opening of the posterior of the two canals by which each tympanum communicates with the common Eustachian tube. The narrow anterior tympanic canal opens just in front of *Ca*, the cleft-like aperture being traversed by the dotted line from *d*. In the Turtle's skull (B) *OpO* is a distinct bone from *EO*, and sends down a process between *f.o.*, the fenestra ovalis, and *f.r.*, the fenestra rotunda, which terminates in no recurrent hook, but otherwise corresponds exactly with the cochlear process *c* in the Crocodile.

The third periotic bone, the *epiotic*, does not remain distinct throughout life in any Reptile or Bird, and its place appears to be taken by a triangular process of the supra-occipital, which shelters the summits of the vertical semicircular canals. But the study of development has shown that this part of the supra-occipital is, in many, if not all, Reptiles and Birds, developed from a separate centre, which subsequently coalesces with the supra-occipital; so that, just as the opisthotic in these animals ordinarily coalesces with the ex-occipital, the epiotic anchyloses with the supra-occipital.

In many Reptiles, though two of the three periotic bones coalesce with their neighbours, the suture between the three persists on the inner surface of the skull, and this suture is always shaped like a Y (Fig. 41, B), the stem of the Y answering to that part of the suture which separates the pro-otic from the opisthotic ossifications, while the diverging branches of the Y correspond with the suture between the epiotic and pro-otic in front, and that between the epiotic and opisthotic behind. In the Turtle an interspace filled with cartilage takes the place of the stem of the Y (Fig. 41, C).

In the adult Crocodile the epiotic is united with the supra-occipital, and the opisthotic with the ex-occipital; but that process of the opisthotic (*c*, Fig. 42, A) which separates the fenestra ovalis from the fenestra rotunda (the anterior and inner edge of which only is completed by bone) where it meets the pro-otic below and anteriorly (at *d*, Fig. 42, A), sends downwards and backwards a process, which curves round the cochlea, and, expanding to a broad plate, adjusts itself by harmonia (at *b*) to the outer and lower edge of the opisthotic, and to part of the posterior edge of the pro-otic. The anterior and inferior angle of the broad plate is thicker than the rest, and is seen in the interior of the dry skull, at the bottom of the stem of the Y-shaped suture (*, Fig. 41, B). If, as has been remarked, this part of the curved cochlear plate of the opisthotic be pressed upon with a point, it gives way; but this is not because it is merely suturally connected with the periotic bones, as has been supposed, but because the lamina of bone by which the cochlear plate is fixed to the opisthotic is very thin and elastic.

Among the many singular speculations which the historian of the theory of the skull will have to record, perhaps the strangest is that which identifies this cochlear loop, imagined to be a distinct bone, with the entire "petrosal" bone of the *Mammalia*.

In Birds, the three periotic bones anchylose with one another, as well as with the adjacent supra-occipital and ex-occipital, so completely, that even the Y-shaped suture becomes obliterated (Fig. 41, A).

The determination of the homologues of the periotic bones in the skulls of Birds and Reptiles, and more especially of the

FIG. 43.

A

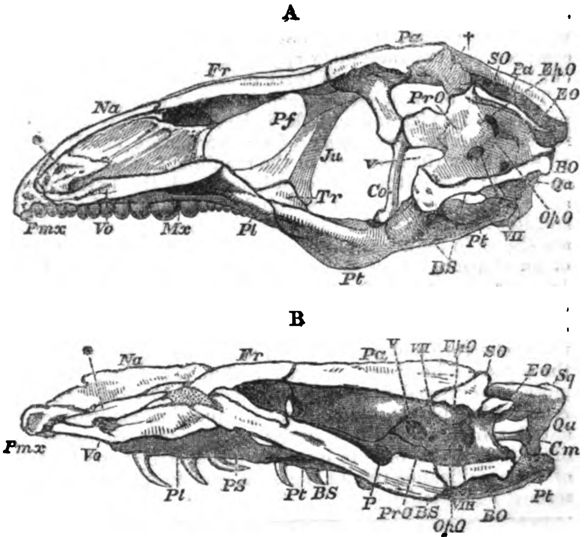


FIG. 43.—A, Vertical and longitudinal section of the skull of a Lizard (*Cyclodus*). B, A similar section of the skull of a Snake (*Python*). †, membranous space in the roof of the Lizard's skull; * *, ossifications in the internasal cartilage; *Co*, the *columella* of the Lizard; *Cm*, the bone also called "*columella*," which corresponds with the stapes.

(b) Cuvier termed this bone the "*occipital externe*," Hallmann regarded it as the equivalent of the "mastoid," and I followed him in my Croonian Lecture. In the absence of a full knowledge of the development of the human *pars petrosa* it was difficult, if not impossible, to see one's way to any better conclusion.

pro-otic, is not only a matter of first-rate importance in itself, but it involves that of certain other bones of the side walls of the skull.

In the *Chelonia*, and in many Lizards, the lateral walls of the cranium between the pro-otics and the prefrontals are entirely occupied by cartilage or by membrane. In the dry skull of the Turtle (Fig. 41, C) it is true that there is an apparent bony wall in front of the pro-otic, but this is only a process sent down from the parietal, which becomes connected with the pterygoid, and with a small, distinct lamella of bone.

In Lizards a distinct bone, rod-like bone *Co* (Figs. 43, A, 44) occupies a corresponding position, articulating above with the parietal, and below with the pterygoid, and receives the name of the *columella*.

FIG. 44.

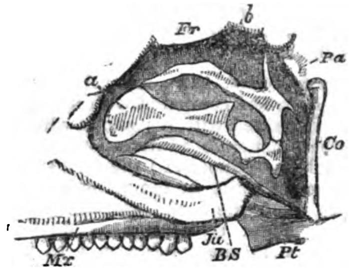


FIG. 44.—The inter-orbital septum of a Lizard (*Iguana*). *B S*, the anterior prolongation or beak of the basisphenoid; *a*, the inferior median ossification; *b*, the superior paired ossification of the left side of the interorbital septum; *Co*, the columella.

In both Chelonians and Lizards the basi-cranial axis is laterally compressed in the presphenoidal region, and is converted into a vertical inter-orbital septum, as in the Pike. In the Chelonians, neither the septum, nor the membranous, or cartilaginous, alisphenoidal and orbito-sphenoidal regions connected with it, present any ossifications, but, in many Lizards, delicate laminæ of bone are developed in this region. In the *Iguana tuberculata*, for example (Fig. 44), the inter-orbital septum is supported below by the prolonged beak of the basisphenoid. Above this, it presents a long median presphenoidal ossification (*a*) forked posteriorly. The forks are connected with two bones, one on each side (*b*), which appear to represent orbito-sphenoids.

The Crocodiles, on the other hand, possess a large and distinct lateral ossification in front of each pro-otic (*A S*, Fig. 41, B). This ossification bounds the foramen for the third division of the fifth nerve in front, and unites with the basisphenoid below and with the parietal above, so far agreeing with the alisphenoid. Cuvier has suggested that it extends so much further forward than the alisphenoid ordinarily does, that it probably represents both the ali- and the orbito-sphenoids; but Stannius has pointed out the existence of two small ossifications close to the optic foramina, with an insignificant descending median stem at their bases. The former he considers to be the orbito-sphenoids and the latter the presphenoid.

In these Reptiles, in *Lacertilia* and in *Chelonia*, the *basis cranii*, as has been already stated, is modified anteriorly into an interorbital septum, as in the Pike; but, in *Ophidia*, the Cyprinoid, or Batrachian type, of skull reappears, and the cavity of the cranium is continued without any sudden narrowing, from above downwards, from its posterior to its anterior end. In the Ophidian skull (Fig. 43, B) the side walls of the cranium, in front of the pro-otics, are completely closed in by bones, which might readily be taken for alisphenoids and orbito-sphenoids; but, according to Rathke, these are merely downward growths of the parietals and frontals, and therefore can have nothing to do with the true lateral cranial elements.

The anterior part of the *basis cranii* in Birds is always vertically elongated into an inter-orbital septum, as in *Crocodilia*, *Lacertilia*, and *Chelonia*. In the Ostrich (Fig. 41, A) the presphenoid is completely ossified, but in other members of the class the nature and extent of the presphenoidal ossifications may vary greatly. The alisphenoid is always well ossified, and occupies its characteristic position in front of the pro-otic and of the exit of the third division of the trigeminal nerve (Fig. 41, A). The orbito-sphenoids, on the other hand, may or may not be represented by bone. In the Ostrich they are present, and are continuous with the presphenoid.

Reptiles possess prefrontal and post-frontal bones, which usually remain distinct throughout life, and are admitted to be homologous with those of Fishes, and therefore the line of argument which identified the prefrontals of the Pike with the lateral masses of the ethmoid in the Man is equally applicable to the same bones in Reptiles. In Birds, the post-frontals have only a doubtful and exceptional distinctness, and in them the true prefrontals seem early to coalesce with the ethmoid. The last-mentioned bone is usually ossified and appears upon the upper surface of the skull, in Birds; while, in *Reptilia*, it almost always remains cartilaginous. In the extinct *Dicynodon*, however, it and the presphenoidal region were completely ossified.

In Birds, in consequence of the prolongation of the snout into a beak, the internasal part of the basifacial axis acquires a considerable size, and becomes the subject of a great variety of ossifications, which, in many birds, are so arranged as to allow the anterior part of the craniofacial axis to be movable on its posterior part. In Lizards, on the other hand, the anterior part of the cranium is rendered movable upon the posterior in another way. The craniofacial axis in front of the basisphenoid is cartilaginous, and consequently slightly flexible, while the roof of the skull between the parietals, the supra-occipital and the periotic bones is merely membranous († Fig. 43, A); hence, the front part of the skull is capable of being slightly raised or depressed, in a vertical plane, upon the posterior part.

FIG. 45.

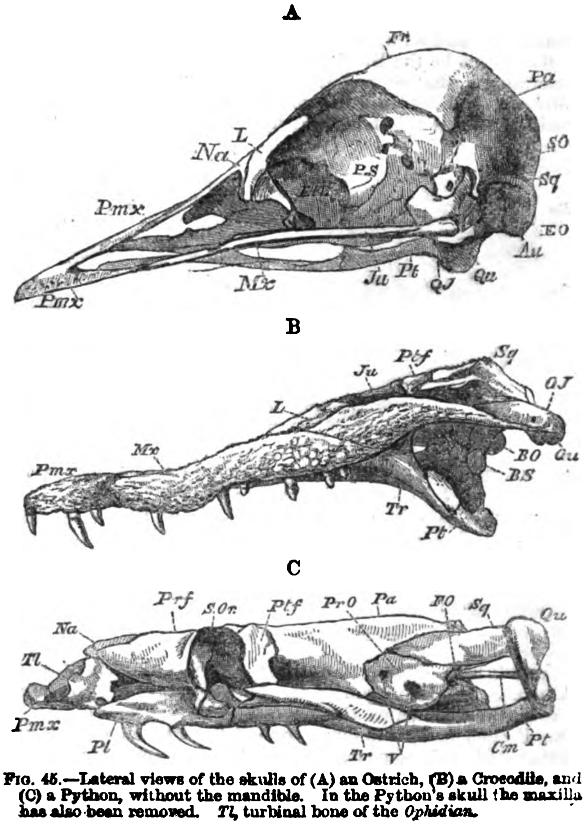


FIG. 45.—Lateral views of the skulls of (A) an Ostrich, (B) a Crocodile, and (C) a Python, without the mandible. In the Python's skull the maxilla has also been removed. *Tl*, turbinal bone of the *Ophidian*.

Next to the pro-otic, the squamosal and the quadrate bones of Birds and Reptiles have been the subject of the greatest amount of controversy among morphologists.

The bone which was originally called "*os quadratum*" is that movable facial bone of the Bird (*Qu*, Fig. 45, A) which is articulated above with the outer side of the periotic capsule, and especially with the pro-otic bone, and below with the *os articulare* of the mandible, while internally and anteriorly it is connected with the pterygoid. In *Crocodilia* (Fig. 45, B) and *Chelonia* a bone, admitted by all to be the homologue of this, is attached immovably in the same region; in most *Lacertilia* (Fig. 46) it is movable, and remains connected with the produced extremity of the pro-otic bone; but, in *Ophidia* (Fig. 45, C) its proximal end is thrust out from the skull upon the extremity of another bone. However, its homology with the quadrate of the Bird is not affected by this circumstance.

With what bone in the human skull does this correspond? Cuvier identified it with the tympanic of Man, and his interpretation has been generally accepted; but the tympanic is always a membrane bone, whereas this is always a cartilage bone. The tympanic directly supports the tympanic membrane, while this bone sometimes gives no direct attachment to the tympanic membrane at all. The tympanic of mammals again becomes smallest in those Mammalia which most nearly approach Birds and Reptiles, and is never known to articulate, by a movable joint, with the *malleus*, which, as we have seen, is the representative of the *os articulare* of the mandible of the lower *Vertebrata*.

It is impossible, therefore, that the quadrate bone should be the homologue of the tympanic of *Mammalia*. On the other hand, it corresponds altogether with the quadrate bone of Fishes, which is united in like manner with the pterygoid arcade, and is similarly connected by a movable joint with the articular piece of the mandible; and this quadrate bone of Fishes is, I have endeavoured to show, the homologue of the incus of the *Mammalia*. I make no question that, as Reichert long ago asserted, the Bird's *os quadratum*, and therefore that of the Reptile, is the equivalent of the Mammalian *incus*.

It is difficult to understand how any doubt can be entertained as to the bone which is the homologue of the Mammalian squamosal in Birds. Lying above the tympanic cavity, between the parietal, frontal, and periotic bones, is a membrane bone (*Sq*, Fig. 45, A) which corresponds with the Mammalian squamosal, and with no other bone in the Mammalian skull.

But if this be the Bird's squamosal, there is no difficulty in determining that of any Reptile, the *Crocodilia*, *Lacertilia*, *Chelonia*, and *Ophidia* all presenting a bone in a similar position. It is this bone which, in the *Ophidia* (Fig. 45, C), carries the quadratum as on a lever; but, as Rathke has well shown, the final position of the quadratum is a result of developmental modification, the proximal end of that bone being originally in *Ophidia*, as in other reptiles, applied to the periotic capsule.

FIG. 46.

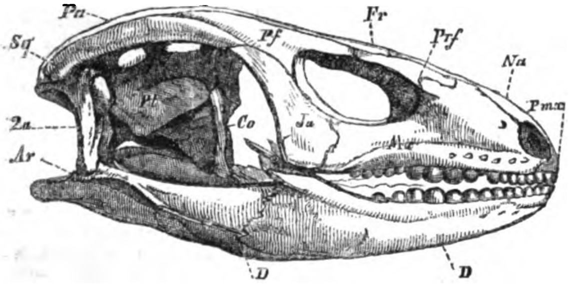


FIG. 46.—The skull of a Lizard (*Cyclodus*). *D D*, Dentary piece of the lower jaw; *Qu*, Os quadratum; *Sq*, Squamosal.

VENEREAL DISEASE IN THE ENGLISH AND FRENCH ARMIES.—Dr. Franklyn, of the 10th Foot, in a letter to the *Times*, thus compares the prevalence of venereal diseases in the French army and our own:—"The French army is very fortunate in this respect. Taking the garrison of Paris and comparing it with some of ours, we find the admissions from these diseases were:—In 1858, Paris, 24 per 1000 men; Aldershott, 411 per 1000 men; and Woolwich, 512 per 1000 men. Sometimes in Paris it fell to 16 per 1000 men, while in England it was 20 times as great; and in the worst garrison—viz., Marseilles—it never reached above 113, or considerably less than one-third of our number even at Aldershott. And there is reason to believe that if it were possible to carry out police regulations, establish special Hospitals in our garrison towns, and occupy the men more with their respective trades, that an immense saving in men and money would be the result, and that in the event of a war we should have a fine, healthy, serviceable body of men, instead of the wretched, ill formed boys who fill up our regiments after a little drain has taken place; boys who, if they enter at 18, have really many years to wait before they become completely formed and able-bodied men."

CHEMICAL AIDS TO THE MEDICAL PRACTITIONER.

By ROBERT DUNDAS THOMSON, M.D., F.R.S.S. L. & E., etc.

No. IV.

BREAD.

Analysis of the Salts of Bread—Determination of the Woody or Ligneous Matter in Bread—Superior Nutritive Value of Brown to White Bread—Proofs—Analysis of Bran—The Removal of Bran impoverishes Flour and Bread—Bran consists of Starch, Sugar, Albumen, and about 10 *per cent. of Ligneous Matter—Conclusions from the Analysis of Bread—Law of the Balance of the Food—Detection of Inferior Flour indicated by the Growth of the Orange Oïdium—Determination of Alum in Bread.* (a)

Saline Matter in Bread.—The natural balance of the saline matter in bread, when compared with flour, is disturbed by the common salt mixed with it; and it will be still more so if alum or other inorganic adulterations are added. Thus in the aërated bread (Paper II.) the total salts were 8·9 grs. per 1000 of bread, while in the fermented bread I found 12·99 grs. per 1000 grs., and respectively 4·88 grs. and 1·49 grs. of common salt. The insoluble salts in the aërated bread were to the soluble as 1 to 2·1, and in the fermented bread as 1 to 6·2. In flour which contained 127 per 1000 of water, the ash amounted to 7·20 grs. per 1000, which, it is to be observed, is considerably under the amount existing in bread containing about three times the quantity of water that we find in flour. Oatmeal with 111 per 1000 of water yielded 19·51 ash, and only ·05 common salt. It has been found that the richer a plant is in nitrogen the greater is the amount of phosphoric acid contained in it.

Determination of the Woody Matter of Bread and Flour.—The acquired preference of white to brown bread has originated the practice of removing the bran from flour by the process of bolting (*blutage*, French). I am not aware that the nutritive superiority of brown to white bread was known upon scientific data prior to the year 1843, when the writer showed that the percentage of nitrogen in white bread was 2·27, = 14·18 nitrogenous principles, while that of brown bread containing bran was 2·63, = 16·43 nitrogenous principles. (*Phil. Mag.*, May, 1843, p. 323. Liebig's *Annalen. der Pharm.*, lvi., 82.) This fact has been amply confirmed by all subsequent experimenters. It is easy to be satisfied that bran contains much soluble and nutritive starch and nitrogenous matter by watching the process of making the Scottish preparation of sowans, an excellent dish for the invalid. The bran of oatmeal is mixed with water and allowed to remain in contact with it for three or four days in a warm place, and then the husk is separated by straining from the watery portion, which is somewhat acid from the formation of acetic acid. On boiling the watery portion down and cooling, it assumes a semi-transparent solidity, and forms an agreeable article of diet. The solid portion consists of starch, fibrin, and albumen, while the residue contains woody matter. To separate chemically the woody matter from the soluble portion of bran we take about 300 grains of bread or flour, reduced to a pulverulent state after drying at 340°, and introduce it into a flask with a capacity of three pints. Over the flour are then to be poured two ounces of a mixture of one part chlorohydric acid and two parts of distilled water. This is boiled for a quarter of an hour, and mixed with about a pint of distilled water. Washing is then performed by decantation, and the woody matter thrown on a filter. The washing is now continued till the filtrate no longer reddens litmus. The woody matter is then washed into the same flask, and mixed with two ounces of an alkaline solution, consisting of one part caustic soda and ten parts water. The whole is boiled for a quarter of an hour, and washed on a weighed filter, and lastly treated with weak chlorohydric acid and water, until the filtrate has no acid reaction. The filter and woody matter are then dried in the air-bath at 340° until they cease to lose weight. Instead of chlorohydric acid we may use sulphuric acid (oil of vitriol) diluted with its weight of water. When kept in contact with the bread for twenty-four hours at a temperature of about 160°, gradually raised to near boiling, the nitrogenous matter dissolves, and the starch is converted into sugar (glucose). Previous to its being thrown on the filter, if very dark-coloured, the woody matter may be decolorised by a solution of chlorine in water. If used for too great a period of time, the chlorine acts upon the integrity of the woody matter. The amount of ligneous or woody matter in flour, according to the preceding mode of analysis, ranges from 1·25 to 2·38 per cent. on the wheat of different years and grown in various localities. When we compare unbolted flour and bran, we find that the latter is palpably richer in nitrogen; for, while the flour will afford 2 per cent. of this gas, the bran will be found to yield 2·38 nitrogen. When the water, nitrogenous matter, ash, and woody matter have been ascertained, the residue consists of starch.

(a) The following it is requested may be corrected with the pen:—*Errata*, Paper II., p. 376, col. 2, line 28, *for* 35,000 septems *read* 5000; line 29, *for* 2205 grs. oxalic acid *read* 310 grs.; line 30, *for* 70,000 *read* 10,000; line 31, *for* 4410 grs. *read* 630.

Analysis of Bran.—It is most important that we should be able to analyse bran in order to be capable of appreciating the grounds upon which it has been long known that this substance is highly alimentary, and that to remove it from flour is to deprive flour of a large amount not only of nutriment, but likewise of meat-producing principles. It is well known both by physiological and chemical research that oatmeal contains more nutritive matter than any other of the cerealia. This may, no doubt, be in some measure due to the imperfect manner in which the bran is separated from the flour. We may truly consider these infallible physiological results which are obtained in the history of such people as enjoy robust health and longevity with oatmeal as their staple article of food, and when chemical analysis confirms these experiments, our conclusions seem to be deduced from a powerful species of induction. When we treat 300 grains of bran with about 2000 grains of acetic acid, specific gravity 1·0267, for twenty-four hours in a flask, a quantity of gluten dissolves. Alcohol, when heated with bran, takes up a portion of gluten; ether extracts fatty matter, and twice the amount contained in unbolted flour. Bran, when boiled with weak chlorohydric acid, and then treated with caustic soda, yields starch, dextrine, and sugar, the latter being determined by a solution of potash tartrate of copper. The actually existing sugar may be distinguished by digesting the bran in hot water, and then testing the filtered fluid with the potash tartrate of copper. The sugar has all the characters of cane sugar, both optical and chemical. The amount of ash is much larger than in flour, as it reaches to 5·8 per cent. The following is the mean composition of bran:—

Starch, dextrine, sugar	50·0
Sugar, uncrystallisable	1·0
Albuminous matter	14·9
Fatty matter	3·6
Woody matter	9·7
Salts	5·7
Water	13·9
Resinous incrusting matter, etc. .	1·2
	100·0

Conclusions from Analyses.—Law of the Balance of the Food, or Relation of the Proximate Constituents of Food to each other.—The careful performance of the analysis of bread according to the preceding processes will have shown that the composition of a fermented loaf of the best kind of flour may be represented by the following table:—

Water	36·10
Nitrogenous principles . . .	10·22
Starch	50·58
Woody matter	1·81
Ash	1·29
	100·00

We here see that the relation of the nutritive to the calorifiant constituents of the bread is very nearly as 1 to 5. The flour therefore we may infer to be foreign flour, as that grown in this country is usually of a less nutritive character.

In the year 1836, Boussingault published a table (*Annales de Chimie*, lxiii., 225), containing the elementary constitution of various kinds of vegetable food. He deduced their equivalents by comparing the amount of nitrogen in each, making the food with the largest percentage of nitrogen the unit of the scale, and placing beneath it the equivalent of other species of food. An example will enable the reader to understand the principle of this method. Wheat flour contains much nitrogen, and turnips possess the smallest amount of nitrogen in the table. Wheat flour stands therefore as 100, and turnips as 1335; that is to say, that 100 lbs. weight of wheat flour would go as far in nourishing an animal as 1335 lbs. of turnips:—

Wheat flour	100
Barley-meal	119
Indian corn	138
Beans	44
Lentils	57
Potatoes	613
Turnips	1335

In this mode of viewing the subject it is obvious that no account is taken of any of the principles of the food except the nitrogen, or perhaps it is taken for granted that, *cæteris paribus*, the nitrogen is the main constituent from which the nutritive value is to be calculated. But this view pre-supposes that the proximate principles have been found the same in each species of food, and that they are all exactly parallel in their functions, the amount of nitrogenous principles alone indicating any real distinction between one species of food and another so far as the power to nourish animal life is concerned. Such was the method adopted of estimating the relative value of varieties of food up till 1845, when the present writer undertook by desire of the Government an extensive series of experiments on the relative influence of various kinds of food in nourishing animals. (b) He found, for example, that sago and arrowroot, which were recommended for the nourishment of cattle, could not be fairly placed in such a table as that quoted previously, because these articles have been subjected to an artificial process of deterioration in a nutritive point of view. Yet, when placed in such a table, they would stand much higher than turnips. Even wheat-starch, which is an analogous body with the farinaceous substances sago and arrowroot, occupies a more favourable position in a nutritive table than in any garden vegetable root. We know, in fact, that in this class of starches, including wheat and potato-starch, arrowroot, tapioca, sago, etc., as much nitrogenous matter as possible is removed by washing the farinaceous matter, which was probably the analogue of wheat flour in the plant from which it was originally derived. And besides, in these starches all the soluble salts and probably part of the earthy phosphates have been separated and lost by the repeated application of water. The varieties of this class of food are not calculated to produce blood, since they have been artificially deprived of some of the essential ingredients of that fluid if they ever possessed them. These considerations showed clearly that the method adopted previously of calculating the nutritive value of food must be abandoned. The researches referred to led to the reflection that an animal has a certain demand made upon its solids and fluids daily, which passes off from the system in the form of water, carbonic acid, urine, and various excretions. These products result from the transformation of the tissues; an animal therefore may be compared in some measure to a field, on which a certain amount of grain is raised at the expense of certain ingredients in the soil. The matter removed both in the animal and in the field must be replaced. The rational method of replacement is to discover what has been removed, and to study the most efficient means of supplying the material thus wasted. But another method is to feed an animal with food which has been proved to be nutritive, and to ascertain by experiment the quantity converted into blood and the amount excreted as fæces. In this way a stall-fed cow was found to consume in a day the following ultimate constituents in the form of nutritive or nitrogenous matter, and of non-nitrogenous or calorifiant constituents of the food:—

	Nutritive or Nitrogenous. lbs.	Non-nitrogenous or Calorifiant, or heat giving. lbs.
Carbon . . .	0·828	5·932
Hydrogen . .	0·109	0 771
Nitrogen . .	0·250	
Oxygen . . .	0·373	6·247
	1·560	13·030

According to this result, 14·56 lbs. of food were daily converted into blood in an animal weighing about 1000 lbs. If we divide the calorifiant matter by the nitrogenous, we find that in an animal at rest the ratio of the nutritive to the heat-giving constituents is about 1 to 8½. When we investigate a similar relationship in different articles of food we find that an animal at rest may be fed on the common kinds of wheat flour. The writer made an extensive series of analyses of grains, etc., determining the proportion of nitrogen contained in them, the heat-forming materials, and likewise the salts, and presented them in the following table :—

(b) Report presented to both Houses of Parliament, Session 1846, "Experimental Reseaches on the Food of Animals," 1846.

Approximate Relation of Nutritive to Heat-forming Matter.

	Relation of Nutritive to Calorifiant.
Cow's milk, food for a growing animal	1 to 2
Beans	1 „ 2½
Oatmeal	1 „ 5
Semolina . . . . Barley	1 „ 7
Flour, food for an animal at rest .	1 „ 8
Potatoes	1 „ 9
Rice	1 „ 10
Turnips	1 „ 11
Arrowroot . . . . . . Tapioca . . . . Sago	1 „ 26
Starch	1 „ 40

—"Experimental Researches on Food," 1846, p. 167; *Liebig's and Wöhler's Annalen der Chemie*, 1847, lxi., 285.

Liebig adopted this view in his "Familiar Letters on Chemistry" (Third Edition, p. 361, 1851), and gave a similar table to the preceding, differing only in such relations as depend on foods grown in different countries, with these remarks :—"It is the elevated mission of science to bring this law of nature home to our minds ; it is her duty to show why man and animals require such an admixture in the constituents of their food for the support of the vital functions, and what the influences are which determine, in accordance with the natural law, changes in this admixture."

Detection of Inferior Flour in Bread.—Although there is no space to consider other modes of detecting inferiority in bread, still it must be remembered that the chemical inquiry is only a portion of the investigation. The following paragraph, however, in reference to a symptom of bad flour I perhaps may be excused for introducing it here, as the plant does not seem to be very familiar. We sometimes find bread, when composed of inferior flour, to give off a disagreeable odour, and to contain a volatile acid. In these cases a quantitative analysis will yield, possibly, no very distinct results ; but there are certain kinds of inferior flour, when converted into bread, which yield an orange-coloured fungus, that I frequently meet with the *oidium aurantiacum* of Leveillé. (Fig. 2.) 1, 2, and 4 represent the outline of the plants, while 3 is a vertical section showing a zone of a brick-red colour, by the development of sporules, and a central portion from which the stems proceed. When the fungus is screened entirely from the light, it is colourless, but when exposed to the light the orange colour appears. Fig. 3. represents a young branch which is sparingly articulated, seen in water, and magnified 300 diameters at the time when the sporules are beginning to form. This fungus is often accompanied with the common white *Penicillium glaucum*, and with another similar yellow species of mould closely connected with it.

FIG. 2.

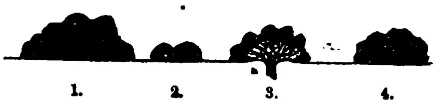
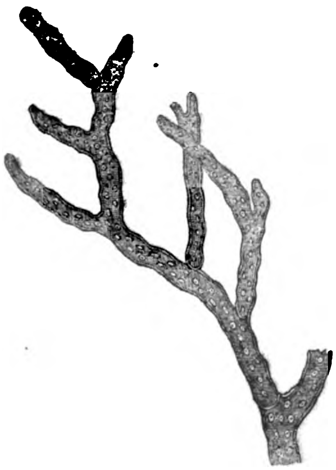


FIG. 3.



Determination of Alum in Bread.—Alum is added to bread principally for the purpose of whitening inferior flour, and of rendering the bread firmer, so that the loaves can be readily separated from each other. The quantity added did not amount formerly to more than five and a-half grains to a four-pound loaf, but latterly it is understood that the quantity added is often much greater—up to fifteen grains per lb. The bleaching ingredient in the alum is the sulphuric acid when it is decomposed and converted into sulphurous acid. Now, the characters of potash-alum are, that it loses 18 atoms of water out of 24, at 142° ; at 212°, 18·95 per cent. out of 45½ per cent. ; at 248° it loses 36·09 per cent. ; at 356°, 43·505 ; at 392° the whole of the water is expelled, and the residue is insoluble. Again, alum, when dissolved and allowed to diffuse, separates into its two sulphates. All this tendency to decomposition may account for the fact that when we digest, in water, bread into which alum has been introduced, it often happens that little or no alum is extracted. The temperature of the baker's oven will undoubtedly tend to render the alum in the exterior portions of the loaf anhydrous, and therefore insoluble. There is also reason to believe that there is some amount of affinity between starch in the hydrous state, as in bread, and the glutinous, nitrogenous bodies in moist bread and alumina. When potash alum ($KOSO_3$, $Al_2O_33SO_3$, $24HO$) is ignited it becomes sulphate of potash, and alumina is set free ($KOSO_3$, and Al_2O_3), the sulphuric acid united to the alumina being expelled. Ammonia alum (NH_4OSO_3, $Al_2O_33SO_3$,$24HO$) leaves, when ignited, nothing save alumina, the ammonia and sulphuric acid being entirely dissipated. There is no certainty, therefore, how much or how little alum exists after baking in the bread. The alumina is the ingredient which must be quantitatively determined, and this earth must be proved to be absent from the tests used (See Paper I.), especially from the caustic soda or potash employed. Corroborative evidence of the presence of alum may also be obtained by steeping a portion of a loaf in water, and ascertaining if the water becomes acid, due to the presence of free sulphuric acid, as distinguished from acetic acid usually present in flour. The bread is calcined as already described.

It is best to separate the alumina as soon as possible from the other constituents of the ash of the bread. When the ash has therefore been dissolved in chlorohydric acid, the solution concentrated to the bulk of three or four ounces, a quantity of a solution of pure caustic soda (Paper I.) is to be added to the acid fluid until the liquor becomes strongly alkaline. The alkaline fluid is then to be boiled, and the ebullition continued in a silver or porcelain basin for a quarter of an hour. The alumina acts the part of an acid to the soda, and forms an aluminate of soda in solution, NaO,xAl_2O_3. All the phosphate of lime and phosphate of magnesia belonging to the flour remain undissolved. They are therefore to be separated by filtering and washing with pure distilled water, but as the alkaline liquor is very caustic, care must be taken by diluting it not to corrode the filtering paper. The filtrate or fluid which passes through the filter contains all the alumina in solution, combined with soda. The alumina must be separated from the soda by means of chlorohydric acid. This acid should be added in slight excess, which may be judged of by immersing blue litmus paper in the liquor, when, if the litmus becomes red, it may be inferred that a sufficient amount of acid has been added. The fluid now contains chloride of sodium and alumina, or rather phosphate of alumina, the phosphoric acid of the alkaline phosphate in the ash of the bread having united with the alumina. When caustic ammonia is now added in excess to the solution of phosphate of alumina in chlorohydric acid, a flocculent precipitate appears, which may be filtered and washed with distilled water until the filtrate gives no precipitate with nitrate of silver. The filter and phosphate of alumina are then to be dried in an air-bath, burned in a platinum crucible, and weighed. The precipitate, however, must be deprived of its phosphoric acid before any conclusion can be drawn as to the amount of alumina contained in the bread.

Separation of the Alumina from the Phosphoric Acid in the Phosphate of Alumina.—The phosphate of alumina is dissolved, therefore, in chlorohydric acid, and the acid solution precipitated by caustic ammonia in great excess. Chloride of barium is then added as long as a precipitate falls. After digesting in a gentle heat for some time the precipitate is filtered off and slightly washed. The precipitate which contains all the alumina and all the phosphoric acid, partly united to alumina and partly to baryta, should be dissolved off the filter by chlorohydric acid in as small a quantity as possible. The solution is to be saturated with carbonate of baryta in a warm place, caustic soda is to be then added in excess, and the liquid heated. Any baryta remaining in the solution is to be precipitated by carbonate of soda, and filtered. Pure alumina now exists in the solution, while the phosphoric acid is united with the baryta in the precipitate. The solution is now slightly supersaturated with chlorohydric acid; caustic ammonia being added to the slightly acid solution, alumina falls in flocks; the precipitate is thrown on a filter, and well washed, till a drop of the filtrate as it passes through gives no precipitate with nitrate of silver. The precipitate and filter are then dried in an air-bath; they are then transferred to a platinum crucible and burned over a gas or spirit flame; the crucible and precipitate are then weighed—every 51·5 grains of the alumina are equivalent to 474·7 grains of potash alum, or 453·5 ammoniacal alum originally added to the bread, the composition of alum being as follows:—

		Potash alum.		Ammonia alum.		
1	atom	Potash (KO)	47·2	1 atom ox. of ammonium		26·
1	„	Sulph. acid (SO_3)	40·	„	„	40·
1	„	Alumina (Al_2O_3)	51·5	„	„	51·5
3	„	Sulph. acid ($3SO_3$)	120·	„	„	120·
24	„	Water (24HO)	216·	„	„	216·
			474·7			453·5

As a check upon the experiment, the phosphate of baryta may be dissolved in chlorohydric acid, the baryta thrown down with dilute sulphuric acid, and the filtrate precipitated by sulphate of magnesia as ammonia-phosphate of magnesia. This precipitate is washed after standing twelve hours with cold distilled water containing about one-tenth part of caustic ammonia; as it is dissolved by pure water. When ignited it is a diphosphate of magnesia, every 111 grains containing 71 of phosphoric acid. The amount thus obtained, and the alumina previously procured, should make up the quantity of phosphate of alumina subjected to analysis.

ORIGINAL COMMUNICATIONS.

ON THE

ADMINISTRATION OF CHLOROFORM.

By ARTHUR ERNEST SANSOM, M.B.,
Late House-Physician and Physician-Accoucheur's Assistant at King's College Hospital.

(Concluded from page 406.)

The late Dr. Snow, in his graphic account of the symptoms of chloroform-narcotism, divided them into four stages. These may be thus briefly expressed: first, the stage of stimulus; second, the stage of sleep; third, the stage of insensibility; fourth, the stage of coma. The phenomena, however, of the progress of anæsthesia cannot be defined by arbitrary limits, and we see the signs proper to one stage often verge into those of another; but Dr. Snow's epitome remains, in a physiological sense, nearly perfect.

A little modification is required when we look at the subject from a practical point of view, and when our object is less graphic delineation than the accomplishment of a definite end.

The division of the march of anæsthesia which I now propose I have endeavoured to form in relation to the several purposes for which anæsthesia is required. The first stage of Dr. Snow includes all the symptoms coincident with perfect consciousness. For practical purposes this need not be considered a stage at all; hence the number becomes reduced to three. The characteristics of these are (1) perversion of sensibility, (2) abolition of sensibility, (3) muscular relaxation.

In the first stage, after the primary exhilaration, the mental faculties become impaired. "There are occasional voluntary movements of the limbs, and, although the patient is generally silent, he may laugh, talk, or sing. Any dreams which the patient has occur in this degree. The loss of sensation is now very considerable." The stage may generally be defined as occurring between the commencement of the process and the onset of involuntary muscular contraction. Frequently the patient is able to declare that sensation is annulled. There is a dreamy half-consciousness, a knowledge of all that is being done around, but a non-appreciation of pain. Mr. Coleman having narcotised himself to this degree, on one occasion extracted his own tooth without the slightest pain, and on another divided the sensitive structures surrounding an alveolar abscess.

In this stage there will be flinching if a wound be inflicted upon the skin, and frequently there will be a cry. These signs it is difficult to interpret; but I believe that in the great majority of instances they are reflex (automatic) expressions not really indicative of suffering. The actual amount of pain is not greater than that of a troubled dream. Thus, on one occasion when I had administered chloroform to a young lady, and had not overpassed this degree, Mr. Cartwright extracting her tooth, she arose from the chair with a cry, and then said immediately, "Oh, excuse me for having had the nightmare!" I am inclined to think that a feeling of humanity often prompts us to push anæsthesia further than we have occasion for; we dread the signs of pain, without questioning the real significance of the signs, and we fear the susceptibilities of the patient's friends who are sure to be near at hand. It is well to recall a case of paralysis wherein a stimulus to the skin would, perhaps, produce as great a shrinking as there might be in a case of chloroformisation. In the first case we should be told that there was no sense of pain, in the second, perhaps, we might be afraid that we had inflicted it. We know that animals will struggle, shrink, and cry when they are deprived of all sensation, and it is said that the trunk of a man after decapitation has been seen to struggle, to free the hands, and to move the lower extremities. (a) It is important, at least for the benefit of a quick reaction from the effects of chloroform, to restrain the anæsthesia to an early stage, and a too sensitive dread must not make us misinterpret signs of seeming pain.

This degree is suited for many simple, quickly-performed operations, such as simple incisions, tenotomy, extraction of a single tooth, etc. We need push anæsthesia no further in midwifery practice, nor in cases of continued pain, neuralgia, and dysmenorrhœa.

In the second stage sensation is *nil*, consciousness partial. After the voluntary movements of the first stage have subsided there is usually a pause, and then an involuntary muscular contraction, first manifesting itself in rigidity of the jaws, and then involving the limbs and trunk. Now, I believe that this spasm is less the more gradual the administration of chloroform. It is most marked in hard-drinkers and in strong men. I consider this muscular tremor as the most practical index of the second stage. Unfortunately there is no reliable sign of absolute anæsthesia. Dr. Snow's test, the absence of winking when the conjunctiva of the globe is touched, is valuable only in a relative sense. Frequently there is no winking whilst there is complete consciousness, as frequently there is this sign even where stertor exists. The muscular tremor is, I think, the most valuable sign, and I consider that absolute insensibility immediately follows it.

It is in this stage that operations of magnitude are usually performed, and it is suited to subdue the paroxysms of mania, tetanus, and epilepsy.

The symptoms of the third stage are muscular relaxation and stertor. The indications for inducing this stage are either the necessity of an absolute abolition of pain or the possibility of pain; or the desire to obviate any chance muscular contraction; or the requirement of an absolute flaccidity of muscle.

The periods of greatest danger in chloroform administration are the first stage and the period immediately following the muscular excitement.

The signs of danger are best determined by a reference to the published cases of death from chloroform. Taking fifty-one cases of which sufficient details are given, I find that thirty-eight declared their danger by sudden stoppage of the pulse; twenty-five of these showed, in addition, as a chief sign, pallor of the countenance. The administrator of chloroform should, I think, never remove his finger from the pulse. My custom is always to keep my finger upon a branch of the temporal artery, and thus be out of everybody's way. Five deaths occurred in patients who manifested great muscular excitement. Collapse immediately followed. Another important point to be noticed is that two deaths have occurred thus—sudden vomiting—instant cessation of the pulse! In one of these cases the chloroform was mixed with ether, in the other it was impure. However these circumstances may explain the causes, it is nevertheless most important to avoid if possible the occurrence of vomiting. Messrs. Lallemand,

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(a) See G. H. Lewes, "Seaside Studies," p. [illegible]. Unzer, "Principles of Physiology."

Perrin, and Duroy chloroformed a dog just after it had taken a hearty meal. They report thus:—The progress of the phenomena were so irregular and so grave that we thought it proper to record the experiment in order to show how important it is, in Surgical practice, to administer chloroform only when the stomach is empty."

Pallor of the face is certainly the most frequent indication, but its converse—congestion of the face—is also a sign of danger. In six cases this was the most marked symptom. Cessation of the breathing was the most noticeable point in eight cases.

The next question arising is,—What is to be done in cases of threatened death? All the existing facts and all the latest experiments point to the conclusions that there is only one perfect stimulus to the failing heart, the stimulus of a sufficiently aërated blood, and that the only means of producing it is the excitation of respiration. Local stimuli to the heart are of no avail, the stimulus must be to the lungs. Messrs. Lallemand, Perrin, and Duroy observe, in their work on the "Rôle of Anæsthetics in the Organism,"—"Animals etherised so far that the movements of respiration cease, all die if left to themselves; if, on the other hand, even when the heart no longer beats, artificial respiration be made to take the place of the suspended natural respiration, the animals in a state of apparent death return to life, and in a short time recover the exercise of all their functions." What happens is this: The insufflation of air acts as a twofold stimulus, the result of which is to recall by a reflex action the beats of the heart and the movements of respiration. This stimulus is physical and not chemical; it only acts at first by re-establishing the mechanical movements of respiration. In proof of this is the fact that insufflation of nitrogen will restore the respiration as well as oxygen or atmospheric air.

Restoring the movements of respiration is therefore the one practical point, and the various means by which this may be accomplished have an equal value.

Artificial respiration may be practised by one of the two postural methods—that of Dr. Silvester or that of Marshall Hall, or by mouth-to-mouth insufflation, or by galvanism of the phrenic nerve.

This last means has successfully restored a case recorded by Dr. Friedberg, (b) in which death was imminent. It is very useful as keeping up the movements of respiration. It is not likely that every chloroformist should at every time be provided with a galvanic apparatus. The artificial respiration may then be begun by one of the Ready Methods, meanwhile the apparatus may be procured and must be applied thus:—One reophore is placed over the sterno-mastoid, the other over the seventh intercostal space. The current is interrupted at equal intervals, so as to produce rythmical contraction and relaxation of the diaphragm. The galvanic arrangement must be powerful.

Before any means for artificial respiration are adopted, the tongue should be well drawn forwards. Dr. Anstie has especially insisted on this, and I can quite agree with Dr. Patrick Black that the falling of the tongue over the glottis is a cause of danger.

I must inveigh against one of the means that I have seen adopted. I have known a patient *in extremis* to be wheeled round to an open window. The rule should be—No cold air. Dr. Richardson has well established the value of warmth as an adjunct to the respiratory efforts. Quite unconscious of Dr. Richardson's experiments, I tried the following:—Having arrested by chloroform the movements of the exposed heart of a kitten, I directed upon the organ a jet of steam. The effect was instantly to restore rythmical contraction.

When chloroform is required to be administered for operations about the face, difficulty is often experienced,—either the chloroform-giving medium is in the way of the operator, or (as in operations upon the jaw) the patient recovers completely from his state of insensibility during the operation, and suffers all the horrors of pain. It is worth while trying any permissible means to obviate this last occurrence. The only practicable way is to give the chloroform-vapour by the nostril. This method was first instituted by M. Faure, of Paris; his idea was that it was of general application,—in fact, that it was the only safe way of giving chloroform. He allowed chloroform-vapour to be breathed by one nostril, the other remaining patent to the air; thus, he thought, sufficient dilution was rendered certain. Practice, however, does not confirm the usefulness or even possibility of this method in many instances, as far as inducing anæsthesia goes; but its value is shown in the special cases we are now considering, as affording a means for continuing the anæsthetic state. For example, if the chloroform is given for an excision of the upper jaw, let anæsthesia be first induced in the ordinary manner, then let a flexible tube, communicating with a reservoir containing chloroform, be introduced up one of the nostrils; the proportion of chloroform now breathed by the one nostril is often sufficient to sustain the state of insensibility.

The apparatus which I have often used for this purpose is merely a wide-mouthed bottle, of about four ounces' capacity, in the cork of which are fitted an india-rubber tube, about three feet long, and a funnel open to the air. The bottle is nearly filled with blotting-paper, and chloroform is poured through the funnel. Mr. Coleman (c) has devised and employed a very neat instrument, which, in addition, has attached to it an elastic globe, which, by directing a stream of air over the chloroform, increases the strength of the vapour inhaled. This is of great advantage when much air is breathed by the open mouth. The application of Mr. Coleman's instrument, however, to both nostrils is, I think, a doubtful benefit. I only allow the chloroform to be breathed by one nostril, and by keeping my finger on the other I use it as a valve for the admission or exclusion of air. An important practical point in the application of this method is to determine whether the patient can breathe freely through the nostrils The necessity of first ascertaining this fact forced itself upon me; for once when I was endeavouring to employ the method in the progress of an operation upon the jaw, I found that I could not succeed in keeping up insensibility. The cause of failure was declared by the patient; he said that he could not inhale by the nostril. Given that the power of breathing through the nose is present, it is next important to determine which nostril is the more pervious; in this the tube should be inserted.

Where it is applicable, it is impossible to exaggerate the value of this mode of administering chloroform in those operations upon the jaws which are usually attended with so much pain and distress. I have employed it in cases of excision of the superior maxilla, in which Mr. Fergusson operated without there having been, in the progress of the operation, one vestige of return to sensibility.

THREE CASES OF EMPYEMA.

By SAMUEL D. HINE, M.R.C.S.E.,
Consulting Surgeon to the Nottingham Dispensary.

The following three cases are illustrative of the most frequent form of this by no means rare disease, that, namely, which beginning with accute pleurisy of a severe type, uncontrolled or uncontrollable, passes on to the rapid formation of pus in the cavity of the pleura, and terminates almost inevitably in death, if not prevented by the appropriate remedy paracentesis thoracis, and judicious after treatment.

Case 1.—Abigail D., aged 7 years, a pale, thin child, of light hair and fair complexion, came under my observation and care, April 10, 1856. Had been previously under the Medical treatment of another Practitioner, from whom and the mother I gathered the following history:—Six weeks previously had been attacked, after exposure to cold and rain, with rigors and sickness, pain in the right side, dry cough, of a hacking, persistent character, high fever, with quick, sharp pulse, etc. Appropriate treatment was had recourse to, but appeared to exert little effect upon her disease, which evidently progressed. She grew emaciated, refused almost all food, being supported entirely by fluid nourishment; dyspnœa appeared to increase daily, and she could not lie down. About one week before my first visit she suddenly commenced to expectorate thick, yellowish pus, containing numerous small bubbles of air, of which she raises, by coughing and great effort, three or four ounces per diem.

I found her sitting up supported from behind with pillows, breathing with great difficulty; countenance expressive of great suffering and anxiety; skin cool; pulse 130, small and weak; respiration 30 per minute. On examining the chest, which appeared narrow, I found the intercostal spaces on the right side filled out level with the ribs, and rather wider than on the opposite side of the chest; on measurement the right side is found one inch and three-quarters greater in circumference than the left; no respiration to be heard anteriorly on right side, but posteriorly a little respiratory murmur of a tubular character is distinguishable; marked dulness both anteriorly and posteriorly on percussion as high as the second intercostal space, where it becomes suddenly clear, indeed almost tympanitic in character, more especially in front. Over the left side of the chest the respiration is loud and exaggerated; the apex of the heart is felt beating two inches to the left of the sternum.

(b) *Virchow's Archiv.*, band xvi.

(c) *Lancet*, January, 1862.

It was evident that fluid was present in the right thoracic cavity, and from the coughing up of puriform matter and clear resonance on percussion in the upper part of the chest, I inferred that it had made its way into one of the main ramifications of the bronchi. I recommended immediate tapping, and introduced a medium-size trocar between the fifth and sixth ribs laterally. Sixteen ounces of thick pus came away, to the very manifest relief of my little patient. Respiration at once became easier. After plastering up the aperture I applied a bandage pretty firmly round the chest. Liberal diet, wine, and bark were prescribed. Next day I found she had passed a good night, and could lie comfortably on the affected side. Respiration much easier; scarcely has raised any pus since the tapping; takes food well; metallic tinkling at the base, and very loud, clear resonance on percussing the right side of the chest.

Three weeks later there were evidences of a re-accumulation of the fluid. I again tapped, and drew off thirteen fluid ounces of greenish pus, rather offensive. A month later the tapping was repeated, and eleven ounces came away. The child continued to progress favourably, improved in health, and gained flesh; could now go out and take the air on fine days. Five weeks after I repeated the paracentesis in the same situation as formerly; eight ounces of pus made its escape. The opening now became spontaneously fistulous, and remained open for three months, discharging small quantities of matter daily. The expectoration of pus had now entirely ceased, and the child looked almost well, taking food and exercise readily, and growing stronger daily. Twice after the fistulous opening had closed it was necessary to repeat the tapping at long intervals, after which the wound healed slowly, and all discharge finally ceased. For some months there was considerable flattening of the right side of the chest, but the ribs gradually resumed almost their natural position, and a considerable share of respiration was performed by the re-expanded lung. The child enjoyed two years of good health, when symptoms of consumption made their appearance, affecting both lungs, and cavities forming, the little patient succumbed.

Case 2.—George S., aged 16 years, a robust, plethoric-looking lad. I was called to see him on October 1, 1858. He had been attacked with severe lancinating pain in the left infra-mammary region seven days previously; the pain was not circumscribed, but extended downwards to the hip, and upwards as high as the first rib. It was accompanied by shivering, followed by high fever, hard, dry cough, and inability to lie on the affected side. He complained to me much of dyspnœa, which, he said, was increasing every day. He could lie in no position but on his back, with the shoulders slightly raised. On exposing the chest, the apex of the heart was seen beating one inch to the right of the sternum; dulness anteriorly on the left side as high as the second rib; no respiration audible over the lower half of the chest on this side; over the upper half, tubular breathing; posteriorly, breathing is heard, tubular almost to the base; dulness on percussion as high as the upper margin of the fourth rib; complete absence of vocal thrill and vocal resonance both anteriorly and posteriorly. The intercostal spaces on the left side appear obliterated; the left side of the chest is found, on measurement, two inches larger than the right. On the right side, exaggerated breathing is heard both anteriorly and posteriorly, with dry râles, especially behind. Resonance everywhere good, excepting over the situation of the displaced heart.

I placed him upon an antiphlogistic plan of treatment; leeches were applied to the left side, followed by a succession of blisters; mercurials and alkaline diuretics were repeated at short intervals.

4th.—Says he feels better; thinks he can breathe a little easier; is free from pain; takes beef-tea and other nourishment readily. The physical signs remain the same as before.

10th.—Feels much the same, but can sleep better at nights. His mother reports that she is obliged to pillow him up higher, or he cannot get his breath.

15th.—He evidently loses flesh, though taking abundance of food; feels very weak. The dulness of the left side appears to get higher up the chest.

22nd.—He appears to lose ground daily; feels very low, and does not take food so well as formerly. Pulse 128, small and feeble; tongue moist by day, but dry and red at night; has much thirst at night; respiration 32 per minute; dulness on percussion appears greater than ever; the left chest now measures two and a-half inches more than the right; the heart's apex is now nearly two inches to the right of the breast bone. Well-marked hectic comes on every evening, and continues till early morning. Recommended the chest to be tapped.

23rd.—Inserted a large trocar between the fifth and sixth ribs, midway between the spine and the sternum; drew off twenty-six ounces of white, creamy-looking pus, afterwards applied plasters and bandage. Feels greatly relieved; can lie on either side, and perfectly flat, in bed.

24th.—Has passed a good night; takes food well; has no pain. The chest appears perfectly empty of fluid; the heart's apex is nearly on a level with the sternum; loud resonance on percussing the chest; on breathing, or coughing, or speaking, well-marked amphoric resonance is heard, and frequent metallic tinkling.

26th.—Progressing favourably; says he shall soon be well. Respiration easy; no signs of any re-formation of pus.

28th.—Every prospect is bright; respiration good; appetite excellent; coughs very little.

29th.—Appears much worse this morning; is sitting pillowed up in bed, and breathing with great difficulty, coughing frequently, and complains of pain over the right side of his chest. On making inquiries, I found he was as well as usual up to bed-time last night, but that in the course of the night his father, who had engaged to nurse him, had got intoxicated, and stripped off the bed clothes, compelling the poor boy to lie two or three hours in a state of nudity. He had thus taken a violent cold, and, upon examining his chest, I found symptoms of pneumonia on the right side.

He gradually sank, and died on the night of November 2, and thus ended through culpable neglect what appeared a highly promising case.

Case 3.—E. H., aged 6 years, a plump, ruddy-looking girl, was admitted under my care at the Nottingham Dispensary on August 18, 1862. According to her mother's account, had taken a severe cold from sitting upon damp grass fourteen days previously, was attacked immediately after by nausea and vomiting, pain over right hypochondrium, and hot, dry skin. There appeared to be great dyspnœa, the child being quite out of breath by merely walking across the out-patients' room. Upon examining the chest, I found complete dulness over the whole right side anteriorly, and posteriorly it was dull, with the exception of a small space close to the spinal column. Over this small space some coarse blowing respiration was distinguishable; over the remainder no breathing at all could be heard. The intercostal spaces were puffed out, and appeared slightly widened. The patient was ordered to be confined to her bed, and placed under a course of mercurials with digitalis and alkaline diuretics. Blisters were also applied to the affected side.

August 27.—No improvement; appears weaker. Takes her food well. Great dyspnœa. Complains of slight catching pain over left infra-mammary region. On applying the ear, slight coarse crepitation and bronchial râles are audible over the left side anteriorly. To be dry-cupped over the left side, both anteriorly and posteriorly.

31st.—The symptoms on the left side are much relieved, but in other respects appear much the same. The effusion on the right side does not diminish, and there is a slight puffiness and bulging over the second intercostal space beneath the clavicle.

With the assistance of my friend, Dr. Truman, House-Surgeon, I introduced a large trocar laterally between the fifth and sixth ribs, and gave exit to twenty ounces of thick yellow pus. Flakes of lymph in abundance kept obstructing the tube, so that the cavity of the pleura was long in emptying. The breathing was manifestly more easy after the operation, though the child appeared considerably exhausted. There remained some dulness over the region of the second, third, and fourth ribs anteriorly, and the bulging over the second intercostal space did not disappear, pointing out the probable existence of two distinct collections of matter. I immediately placed the little patient on a liberal diet of meat and stimulants, and prescribed the following tonic:—℞ Acid hydrochloric dil., ♏xl.; decoct. cinchonæ, ℥jv. Capt. ℥ss., 4tis horis.

September 2.—Appears much improved. Respiration twenty-five per minute; pulse stronger; appetite improving. The chest to be kept bandaged.

4th.—Continues to improve. The bulging over the second intercostal space is daily growing more prominent, and slight redness is apparent on the surface. On removing the dressing from the wound about twenty ounces more pus escaped. Treatment to continue the same.

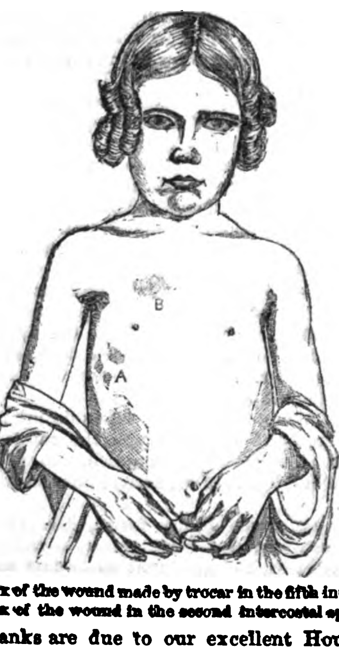
10th.—Says she feels much better this morning. During the night the collection of matter over the upper part of the chest burst through the skin, and the mother thinks nearly a pint of thick matter escaped. It continues still to ooze slowly through the opening spontaneously formed, and the lower wound also discharges a little daily.

October 1.—She both looks and feels much better, is gaining flesh, but sleeps badly at night. ℞ Pulv. Doveri, gr. v., omni nocte sumend. ℞ Ammoniæ sesquic., ℈j.; infus. serpentariæ, ℥viij.; capt cochl. 1 magna 4tis horis.

20th.—My little patient has walked this morning to see me at the Dispensary, a distance of more than half a mile. Says she feels much stronger. Has a good appetite. A considerable amount of pure vesicular breathing is heard over a large portion of the affected side, both anteriorly and posteriorly. There is much flattening of the ribs on the right side of the chest. Both wounds continue to ooze with matter, but very little escapes from the lower wound, which seems inclined to heal. The wounds to be dressed with wetted lint and oiled silk. To take cod-liver oil and steel wine, a dessert spoonful of each three times daily.

November 3.—Is much improved in flesh and strength; the lower wound has granulated, the upper continues to discharge a little daily. To continue the medicine.

By the end of January of the present year the child was so well as to require no further attendance. The wounds were perfectly cicatrised, the flattening of the right side of the thorax had considerably diminished, and she looked fat and ruddy. Takes long walks every day, and has no cough or difficulty of breathing. I have seen her within a few weeks (July, 1863,) and she appears in perfect health, and the right side of the thorax appears as capacious as the left, scarcely a trace of the falling-in of the ribs remaining. The accompanying photograph shows very well the state of the chest at the time it was taken, February, 1863.



A. The cicatrix of the wound made by trocar in the fifth intercostal space.
B. The cicatrix of the wound in the second intercostal space.

My best thanks are due to our excellent House-Surgeon, Dr. Truman, for the zeal and assiduity with which he supported my efforts in this highly interesting and successful case.

I fear that the operation of tapping the chest for empyema is often left unperformed in cases where it would afford the patient a good chance of recovery. In young subjects I would most earnestly urge its performance, as in them the reparative powers of life are so active and powerful, and the all but hopeless nature of the disease, if left to the tardy mercy of expectant remedies, ought surely to plead for its employment in all cases where it is evident that the patient is in imminent danger of impending suffocation, or worn out by the supervention of hectic fever.

Some advocates of the operation are in favour of enlarging the wound, and treating the case like any abscess, by leaving free exit for matter. I have doubts of the propriety of this step, for although a little air passing into the thoracic cavity does not involve much danger to the patient, the very free access of atmospheric air at every act of respiration must, I conceive, considerably favour the decomposition of the puriform secretion, and therefore imply increased peril to the patient. I hold it to be better to close the wound with plaster, and place several compresses of lint over and around it, removing the dressing every two or three days for the escape of matter. By this means, if a little pus should escape by the wound, it will be absorbed by the lint, and the whole chest being pretty firmly supported by a fine flannel bandage, nature will be assisted to a healthy contraction and expulsion of all the pus secreted.

The after-treatment will probably require modification in every individual case, but, as a rule, I think few will deny should be of a thoroughly supporting tonic character to promote, if not ensure, success.

LARGE PEDUNCULATED FIBROUS POLYPUS ATTACHED NEAR THE FUNDUS UTERI,

DISTENDING THE UTERUS AND VAGINA, AND GIVING RISE TO FREQUENT HÆMORRHAGE AND OFFENSIVE, GREEN-COLOURED DISCHARGE—DISTENSION OF THE OVARIAN EXTREMITY OF THE RIGHT FALLOPIAN TUBE BY THE DISCHARGE, AND ITS ULTIMATE ESCAPE INTO THE ABDOMINAL CAVITY—DEATH FROM SYMPTOMS OF PERFORATIVE PERITONITIS.

By JOHN COCKLE, M.D.,
Physician to the Royal Free Hospital.

THE following case is published from its extreme rarity. The reporter is scarcely aware of any other recorded instance:—

M. G., aged 39, unmarried, barmaid by occupation, was admitted into the Hospital in July, 1863. She had been suffering nearly two years with constant leucorrhœal discharge and frequent uterine hæmorrhage. It was mainly in consequence of this loss, and the debility it caused, that she entered the Hospital. She complained of very little abdominal uneasiness or pain, certainly of none approaching the character of expulsive. She was gradually losing flesh. Her face was anxious, perfectly bloodless, and unusually sallow, indicating either most aggravated anæmia or malignant disease. Examination revealed a large tumour, distending the vagina so completely that it was impossible to ascertain its upper attachment. The tumour, or rather the portion accessible to touch, was of nearly uniformly smooth surface, slightly yielding to pressure, and altogether painless. Seen through the speculum it was of dirty brown colour, markedly contrasting with that of the walls of the vagina. At the upper part of the vagina a considerable quantity of extremely offensive, thick, green-coloured matter coated the fingers. The comparatively smooth and slightly yielding surface of the vaginal portion of the mass, and its entire absence of sensibility, led to the belief that it was a fibrous tumour connected with some part of the uterus rather than disease of the cervix uteri itself. Palpation of the abdominal walls detected no very marked enlargement of the uterus.

After a few days of repose and nutritious diet, considering the very serious impairment of the health from the constant draining, and the probability of the mischief likely to result from so much offensive discharge bagging at the upper part of the vagina, it was decided to attempt, without further delay, the removal of the tumour by means of the double canula of Gooch applied as high up as practicable. The lower portion of the mass was first seized with the forceps of Museux, without giving rise to the slightest sensation of pain. Traction, however, caused no further descent. The canula was readily adjusted, but on attempting gradually to tighten the cord so much pain was experienced that it was deemed prudent at once to remove it, fearing some portion of the uterine structure might be included. Two days subsequently the menstruating period recurred, and lasted as usual for more than a week. It was attended by no apparent complication, but just as it was completed the patient was seized with sudden and violent abdominal pain and almost incessant vomiting, speedily followed by great exhaustion. On the following day the symptoms of peritonitis, with much effusion, were strongly marked. There was no great amount of meteorism. The abdomen was still kept covered with poultice, and opium and stimulants, the former in full doses, continued. Death occurred in the course of the evening.

Post-mortem Examination Twenty-four Hours afterwards.—The following notes were written down at my dictation by Mr. A. Jackson, acting Medical officer:—The body was very exsanguined, but not greatly emaciated. A considerable layer of fat existed on the abdominal walls. The peritoneal sac contained a large amount of sero-purulent fluid. The omentum, lower part of small intestines, and pelvic viscera were pretty firmly united by recent lymph into a common mass. The portion of small intestines was much inflamed. On examining the uterus and appendages after the removal of the intestines, the greenish pus was seen escaping from the ovarian extremity of the right fallopian tube, which still contained a considerable quantity, being much and permanently dilated. Its mucous lining was very soft and spongy, and the tube in places obstructed. The uterus was greatly distended by the tumour. Its walls measured one-third of an inch in thickness. The neck was quite effaced. The proper tissue of the uterus was uninflamed, but its lining membrane was very dark, soft, and smeared with the green-coloured pus. The polypus was attached to the posterior wall of the uterus, close to the fundus, by a very dense pedicle, which at its origin seemed formed of three short cords incorporated with the uterine tissue. The pedicle was 1¼ inch long, half an inch broad, and nearly 1½ inch in circumference. The polypus itself was of pyriform shape, the apex directed downwards. It measured 6½ inches in length, and its circumference was 10 inches. The weight was 13 oz. A smaller polypus, the size of a bean, was situate near the pedicle. The right ovary was apparently healthy, the left atrophied, and its tissue discoloured. The bladder was very small and contracted. The parts are preserved in the Hospital museum.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

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GLASGOW ROYAL INFIRMARY.

GUNSHOT INJURY OF HEAD—DEATH—AUTOPSY —CLINICAL REMARKS.

(Under the care of Dr. GEORGE BUCHANAN.)

JAMES L., aged 19, admitted November 10, 1862, while stooping forward to examine the target in a shooting-gallery received a musket-bullet in the back of his head. It appears that he was engaged in a shooting-match with a party of soldiers, and some dispute having taken place as to the point where the mark was last hit, L. was endeavouring to ascertain this by reaching forward in front of the target. The soldier whose turn it was to fire, overrating his powers as a marksman, discharged his piece before patient had withdrawn himself sufficiently, and the result was the serious injury for which L. was admitted to the Hospital.

On admission, he stated that he was stunned by the blow, and remained unconscious for some time, but he is now quite sensible, although pale and collapsed. Pupils irregularly dilated, but contract when a bright light is brought near the eye. Near the upper angle of occipital bone, a little to the right of median line, is a scalp wound the size of a sixpence, through which the point of the finger detects the skull denuded of periosteum to the extent of a crown-piece. In the centre of this bared surface is a depression the size of a fourpenny-piece, with rough, irregular edges. The piece which was driven in was slightly movable. It was obvious that the inner table of the skull must be fractured much more extensively than the outer, and probably the dura mater and brain were involved in the injury.

A crucial incision was made in the scalp to afford a better view of the lesion, when it was found that a fracture extended out of the small depression for an inch to the right and another for a short way upwards, but there was no depression on either side. It seemed clear that the only chance of the patient's recovery lay in having the depressed portion raised to allow of the removal of those portions underneath, which it was judged would be sources of irritation to the brain. Although there were no urgent symptoms, it was one of those exceptional cases where the proper practice evidently was to elevate the depressed portion of bone before it had done such injury as to produce cerebral symptoms calling for surgical interference at a later date. The elevation of the fractured and depressed portion of bone was attended with some difficulty, but by cautiously inserting an elevator at the edge the button-shaped piece was prized out. The inner table was now found to be more extensively injured, the fragments being larger, and extending underneath the edges of the opening. It was therefore necessary to employ very gentle and cautious traction in order to remove them. One piece was so large that it required the application of the bone pliers to reduce it to a size which would pass through the original orifice in the skull. When the detached and denuded portions were all removed, it was seen that the dura mater was injured only to a very slight extent. There was no hæmorrhage, and generally patient was in a state as favourable as could be looked for after so serious a lesion.

Water-dressing to the wound, perfect quiet, rest in the horizontal posture, and mild, unstimulating diet were ordered; head to be shaved.

November 11.—Patient is very comfortable to-day, having slept a good deal; pulse 84.

12th.—Has been going on favourably till this afternoon, when he complained of more pain in head. Face flushed; pulse bounding, slight tendency to delirium. Three leeches to back of head; ice to be applied. Hydrarg. submur., gr. iv.; to be repeated in two hours.

13th.—During the night patient vomited some clotted blood; is now greatly relieved; delirium gone; pulse calm, 80. To have an enema.

15th.—Continues to improve; wound looking healthy. Ice applied at intervals. Pupils natural, and sight perfect.

17th.—Healthy pus discharged from wound; otherwise continues favourable.

December 7.—Since last report has continued in a very favourable state. Wound still discharging pus. Has had several enemata, as bowels are sluggish. It is only by strict injunctions that he is persuaded to remain in the recumbent posture. Feeling so well, he desires to sit up, but is forbidden to sit up. This morning he complained of a severe pain in the wound, which was found to be caused by a portion of loose bone. This was easily removed, and proved to be a separated portion of inner table.

13th.—Has been much better till this date, when to-day he has shown some symptoms of cerebral irritation. Sol. mur. morphiæ, gtt. xxx.

18th.—Portions of dura mater and cerebral matter in a sloughy condition have been discharged from the wound the last two days, and the cerebral excitement continues. Bowels not active. Calomel, gr. iii.; jalap. ʒss.

19th.—Bowels acted freely, and is calmer.

24th.—Has been drowsy and weak the last two days. Can be roused to answer questions, but health seems impaired. Brandy, ℥iv.

26th.—Patient is gradually becoming more comatose. Passing urine and fæces involuntarily. Wound discharging freely very fœtid matter.

January 7.—Patient gradually sank, and died comatose this morning.

Post-mortem Examination of Head.—The whole surface of the brain was covered with purulent matter. The substance of the brain was quite natural, except in the immediate vicinity of the wound, where there was a cavity about one inch in depth, the sides of which were formed of cerebral substance in a sloughy condition.

Clinical Remarks by Dr. Buchanan.—The above case had many points of interest. First, the treatment on admission, viz., the removal of the impacted and very slightly depressed portion of fractured bone without any urgent cerebral symptoms calling for operation, founded on the opinion that the inner table would be more extensively injured than the outer, the correctness of which was apparent during the proceeding.

Second, the favourable state in which the patient continued for so long a time. Third, the marked effect of the application of ice and purgation on the slight cerebral disturbances which occurred during the first month. Fourth, the fatal result taking place two months after such a serious injury.

Several important Medico-legal questions occurred during the progress of the case. The day after the injury the legal authorities desired to interrogate the patient as to the cause of the accident and other matters; but as the life of the patient was of the first importance, I desired them to delay the inquiry, and kept the patient in perfect quiet, free from any disturbance for some days.

A fortnight after the accident I was asked to draw up a Medical report on the case, to be submitted to the Procurator Fiscal. At this time the patient was progressing most favourably, but the opinion I gave was very guarded, and expressly stated that the patient could not be considered out of very serious danger to his life for many weeks, and must still be regarded as being in a most critical state. The fatal result proved that the opinion was only too true.

THE HERTFORD INFIRMARY.

GUN-SHOT WOUND OF THE HAND—OPERATION —TETANUS, PRINCIPALLY IN THE FORM OF TRISMUS—RECOVERY.

(Under the care of Dr. ELIN.)

George P. aged 45, a shepherd, living at Digswell, Herts, a dark, muscular, healthy-looking man, of sober and regular habits, was brought to the Hertford Infirmary on June 20, 1863, for extensive injury of his left hand from the bursting of a gun barrel.

The muscles of the ball of the thumb were much lacerated, they, with their integuments, were torn up from the palm of the hand, and completely separated from the metacarpal bone of the thumb; the bones of the thumb denuded of their covering (except a narrow piece of skin on the dorsum of the metacarpal bone, and which retained it to the hand), were blown off at the carpo-metacarpal articulation. The forefinger was stripped of integument, leaving the tendons and their sheaths exposed; there was also a compound comminuted fracture of the metacarpal bone of the forefinger; the metacarpal bones of the middle and ring-fingers were also fractured, but not displaced or exposed. He could move the middle, ring, and little fingers, the former not so well as the two latter. Sensation was normal, except on the radial side of the middle finger, which was impaired; there were some superficial flesh wounds about these fingers, but not of any consequence.

I saw the man within a short time of his admission, and my own feeling was to remove the shattered portions, as there were integuments enough left, even allowing for some sloughing, to make a good covering for the outer side of the hand, and to leave the three remaining fingers with a prospect of making half a useful hand, an important thing to a working man, but a consultation was held, and it was thought desirable by some to amputate above the wrist and make a clean operation of it; however, my friend Dr. Davies coming in just before the operation, and agreeing with my view of the case, I performed the following operation:—

The patient being under the influence of chloroform, the portion of integument covering the dorsum of the metacarpal bone of thumb was dissected back (this formed one side of the triangular flap), the bones of the thumb were then removed; the phalanges of forefinger with portion of metacarpal bone was removed at the fracture, the fractured end of remaining portion made smooth, the lacerated and ragged edges of the integuments were pared and made even, the flaps were brought together and supported by strips of wet lint.

He appeared to feel the shock of the accident a good deal. Ordered a bark and ammonia mixture. He progressed favourably for several days, taking occasionally mild aperients. Pulse about 90; skin moist; appetite fair. A healthy discharge of pus soon made its appearance, and the edges of the integuments (as I expected) began to slough to the extent of about a quarter of an inch. The wound was kept moist with wet lint, and washed occasionally with a solution of the liq. carbon. deter.

June 27.—Complains to-day of some uneasiness in his throat and stiffness in the back of his neck, he thinks from cold. In his description of the first symptoms to me, after his recovery, he stated he felt a constant desire to gape, and on his mouth closing again it seemed as if he could not get it close enough, and the teeth clenched one upon the other.

July 3.—Complains of cramp in left leg, stiffness in neck, back, and jaws; cannot open his mouth comfortably, evident signs of tetanus setting in. Tongue, when put out, arched and furred; pulse 94. Sloughs have separated, and wound looks healthy.

4th.—Trismus increasing; ordered tr. cannabis Indic., ʒj. every half hour; poultice to hand; turpentine enema; ℥xij. brandy per diem, and beef-tea.

5th.—The cramp in leg less severe, but stiffness of jaw increased; can hardly protrude the tongue; a free discharge from wound; bowels confined.

7th.—Has taken five ounces of the cannabis without any marked result. Turpentine enema daily to keep the bowels free; a wedge placed between the front teeth.

9th.—The jaw closed; is able to swallow fluid through the aperture of some vacant teeth at the side of his jaw; complains of pain in left lumber and hypogastric regions; the limbs twitch a good deal, more so at night; took a dose of some fresh cannabis last evening, which was followed by a sense of chill and numbness around his heart, and he felt he was going to die. He rallied under the influence of brandy; complained of feeling very weak. Ordered full doses of quinine and ferri. sesquichlor. ter die. The cannabis was omitted; continued his brandy and beef-tea; pulse 96.

15th.—Symptoms continue much the same; great weakness, but takes his nourishment; twitching of limbs increased by the slightest excitement, or by any one coming upon him suddenly.

19th.—Pain in hypogastric region; some difficulty in passing his water; slight symptoms of opisthotonos; stiffness of jaw still continues; wound looks healthy and granulating; pulse 100.

22nd.—Can open his mouth a little way; pulse 96; wound cicatrising; pain in abdomen, probably from flatulence. Ordered a rhubarb carminative draught; the bowels have been relieved daily by enemata.

25th.—Can open his mouth further; bowels have acted for the first time naturally since the tetanic symptoms commenced; more free from pain in abdomen; says he is more comfortable than he has hitherto been.

27th.—Can open his mouth wide enough to put out the tip of his tongue; he says he has gained strength; pulse 92; has a little twitching of the limbs when excited; some little difficulty in emptying his bladder; bowels require assistance; no stiffness in neck, but some in legs; sleeps tolerably; hand nearly healed.

29th.—Can open mouth still further, and protrude tongue, which is furred; bowels still costive; pulse 94; gaining strength; twitching of limbs still continues under excitement.

August 3.—Can open mouth to three-quarters of an inch; can chew his food; pulse 92; tongue clean; is much stronger; no trouble in micturition; gets up to-day; has taken seven ounces of brandy daily for the last week.

6th.—No spasm of jaw this morning, which he has usually had upon waking; he walks about the ward; pulse 80.

8th.—Went out for a walk in the garden; brandy, four ounces daily.

19th.—He leaves the Infirmary to-morrow morning. Feels as well as ever he did in his life. Can open his mouth freely, no pain or stiffness about jaw or neck, no twitchings of muscles anywhere. Tongue clean, bowels moved daily, appetite good, can eat anything. Wound has cicatrised well. The metacarpal bones of the three remaining fingers have united firmly and in good apposition. He can move all the fingers, the ring and little better than the middle, but this is probably confined in its movements at present by the firm cicatrix of the wound, but there is every prospect of his eventually having half a useful hand.

Dr. Elin adds:—I don't think that much good effect can be attributed to the administration of the cannabis Indica in this case. He took large doses of it, frequently repeated for some days, and then upon taking one dose of a fresh quantity procured, the symptoms occurred that have been described, and the drug was then omitted. I believe the constant supply of nourishment and stimulants administered to him, keeping up his nervous power, which was evidently much taxed by the tetanic spasms, tended as much as anything to his ultimate recovery.

SEAMEN'S HOSPITAL, "DREADNOUGHT."

TETANIC SYMPTOMS FROM STRYCHNIA—ADMINISTRATION OF CHLOROFORM—RECOVERY.

[Communicated by Mr. Leach.]

Particulars of the following case may be interesting, tending to show the beneficial effects of chloroform in tetanic spasm, and to confirm the now prevalent idea that strychnia is cumulative :—

Charles W., aged 45, an American, was admitted into this Hospital on July 4 last, suffering from partial paralysis of the lower limbs and bladder, the result of a fall from the mainyard of a ship at sea. General stimulants, with good diet, were first given, and, on the 15th instant, 1/20th of a grain of strychnia was prescribed, to be taken three times a-day. This treatment was continued with very good effect for eleven days, at the end of which time he had taken one grain and a-half of the drug. I am confident, from strict personal superintendence of the case, that neither more nor less of the medicine was taken, and that no premonitory symptoms of tetanus appeared. At 9·30 on the morning of the 26th, after screaming and crying out deliriously, he was suddenly seized with a severe spasm of all the limbs and voluntary muscles, particularly those of the face and neck; the eyes were fixed and staring, the pupils being alternately dilated and contracted; the respirations were very quick and irregular, and there was considerable frothing at the mouth. These spasms occurred at tolerably regular intervals of about three minutes, each spasm lasting from two to four minutes; the muscles of the limbs were principally affected; food was vomited after the first spasm, and urine discharged during the first three spasms. Warmth was applied to the feet, thighs, and trunk, and by the advice of Dr. Rooke, who saw the case with me, I gave chloroform by inhalation in the ordinary manner. The quantity used was about six drachms; it was given at the commencement of each spasm, and its influence was most markedly beneficial in allaying the strength of the attacks, decreasing their duration, and increasing the intervals of time at which they occurred. This plan was continued for two hours, the last spasm occurring at 11·30, at which time the pulse was strong and full, numbering 100; the skin cool and moist; the respirations 28 to 34 in the minute. He slept well at night, and no return of tetanus occurred.

NOTTINGHAM GENERAL HOSPITAL.

WOUND OF THE HEART BY A BAYONET—DEATH—AUTOPSY.

(Under the care of Mr. THOMPSON.)

[Reported by Mr. Littlewood.]

J. H. N., aged 17, a member of a Volunteer corps, was admitted about 7 o'clock on the evening of October 5, 1863, with a penetrating wound of the left side of the chest. His family history was healthy. General health good. Habits temperate.

On admission he stated that after a review his company was marching to the railway station, and having loitered behind, he was running up to them when he stumbled, in the act of which his bayonet was thrown from its sheath and alighted on the ground, point uppermost. He fell upon it, and it entered his chest. He drew it out, and walked a short distance, when he fainted. He was conveyed to the General Hospital, Nottingham, where he arrived about an hour after the accident. He was pale and faint, and bore traces of great loss of blood. He was quite conscious.

On examining the left side of the chest, there was found a wound of a triangular shape, situated between the fifth and sixth ribs, about an inch and a half below and external to the nipple, its direction being inwards, backwards, and a little downwards, and admitting the tip of the little finger. There was slight hæmorrhage from it. Half an hour after admission, in the absence of Mr. Thompson, he was seen by Mr. Thomas Wright. On removing a portion of wool which had been applied to the wound, dark-coloured blood slowly trickled down, and when the integument was drawn aside, so as to make the wounds in the integuments and intercostal muscles correspond, air passed in and out, and arterial blood issued in jerks from the upper edge of the wound. It not being possible to secure the artery which furnished the blood, Mr. Thomas Wright plugged the wound after the manner recommended by Miller and various French military Surgeons. A little brandy was given to overcome the faintness.

October 6.—This morning a small quantity of blood was found to have escaped during the night. He was still pale and very weak. On percussing the left side of the chest dulness was found below the level of the wound, preternatural resonance above it, and slight emphysema of the cellular tissue surrounding it. He had no cough or bloody expectoration, but complained much of thirst. Pulse 120. Respirations 56 per minute. Vespere.—The plug was withdrawn by Mr. Thompson. No external hæmorrhage followed it. Sutures were applied to bring the lips of the wound together, and soap plaster over it and to the left side of the chest. Respirations had increased to 80. An effervescing mixture was ordered to be taken every four hours.

7th.—There was complete dulness below the level of the wound, with absence of respiratory murmur. Above it there was diminished respiratory murmur, and percussion elicited undue resonance. There was inability to lie on the uninjured side. He complained of pain and a sensation of fulness in the epigastric region. In the mammary, infra-mammary, and infra-axillary regions of right side were heard subcrepitant râles, and on percussion there was slight dulness. A pleuritic friction sound was also heard over the base of that lung. The heart was pushed towards the right side, and over it was heard a double friction murmur, more distinct when the breathing was stopped. Pulse 136. Respirations 60. Ordered ℞ Antim. potas. tart., gr. ¼; pulv. opii, gr. j.; hydrarg. chlorid., gr. ij.; conf. rosæ, q. s. Fiat pil. 2 dis horis sumend. A consultation was called, when a No. 10 flexible catheter was introduced through the wound into the pleural sac, and about a pint of brownish fluid blood was withdrawn, which, on standing some time, feebly coagulated, after which strips of soap plaster were reapplied. 3 p m.—No marked change. Adde pil. Pulv. digit., gr. ¼. Vespere.—About a quarter of a pint of blood was withdrawn through the catheter, which afforded some relief. There is no cough nor expectoration.

8th.—The undue resonance of left side was much diminished, the heart had in a great measure returned to its natural position, and a peculiar sound was heard near its apex, suggestive of a collection of air and fluid in the pleural sac. A small quantity of blood had come away from the wound. Pulse 136; respirations 54. His feet felt cold and clammy. He wandered a good deal in speech, but when roused answered questions rationally. Sordes began to accumulate on tongue and teeth. Omit. pil. ℞ Ammon. sesquicarb. gr. iv.; sp. ætheris sulph. co. ♏vii.; mist. camph. ℥j. M. 4tis horis; wine ℥vi. 3 p.m.—No alteration in symptoms. To apply blistering collodion to right side of chest. As the bowels had not been moved, an enema was ordered. 9 p.m.—Has had four enemata, very little effect was produced on the bowels. He was turned upon his left side.

9th.—There was a good deal of discharge from the blister, but it afforded no relief. His breathing was very short. Sordes accumulated on the tongue, teeth, and lips; continued to wander in speech; feet and legs cold; face paler; cheeks and lips slightly livid; pulse much weaker and faltering. Increase wine to nine ounces. To have enemata of beef-tea and port wine every two hours. ℞ Potas. chlorat. ʒiss; dec. cinch. ℥viii. M. ℥j. 2dis horis. 3 p.m.—Tongue clean and moist. Took some beef-tea and arrowroot. Breathing no better. Towards evening he had a free motion from the bowels, which somewhat relieved him. A short time afterwards he suddenly appeared much worse, face became more livid, pulse so rapid and feeble as not to be counted, became insensible, and died about 8 o'clock.

Autopsy Eighteen Hours after Death.—Rigor mortis complete. The wound, its situation and direction, as stated above, penetrated the pleura costalis, passed over the thin edge of lung without manifest injury to it, perforated the pericardium, and thus entered the left ventricle of the heart about an inch and a-half from its apex, traversing the left lateral and posterior wall obliquely, and coming out close to the septum ventriculorum. A probe was passed through the wound, the ventricle being opened in the usual way, and on examining its inner surface a small part of the probe was seen between the columnæ carneæ, again passing through the pericardium it went backwards and a little downwards, into the posterior mediastinum, then behind the aorta, but in close contact with it, and entered the vertebral column somewhat to its left side, between a body and an intervertebral cartilage, and terminated in the right pleural sac. There was about a pint of dark coagulated blood in the left pleural sac; the left lung was collapsed and consolidated; the pleura covering the lung and chest was injected and covered with recent lymph. There was effusion of lymph into the pericardium, the latter contained two small clots of blood. A small quantity of dark coagulated blood was found in the right pleural sac, close to the puncture where the bayonet had entered, and it was over the lower lobe of the right lung that some doubtful friction sound was heard during life.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 7.

◆

PESTILENCE AT PLYMOUTH.

Dr. Cookworthy, in the last report which he presented to the governors of the Plymouth Dispensary, made some very unpleasant statements as to the mortality of that town in the year ended August 31, 1863. Both the aggregate mortality and that arising from zymotic disease were increased, the former being 23·98 per thousand of the people, whereas in the foregoing year it was 22·48, and the zymotic being now 27·34 per cent. of the deaths, whereas last year it was only 20·83.

The moral of Dr. Cookworthy's statement is this: "Sanitary measures are costly and useless." To quote his own words:—

> "Our neighbours at Devonport are said to be desirous to have the provisions of the Public Health Acts of 1848 and 1849 applied to their town, on the ground of its alleged high rate of mortality. Let us see what these provisions have done for us in a sanitary point of view, taking the test of the healthiness or unhealthiness of a town, as given in Mr. Rawlinson's report, page 37, to be its '*exemption or non-exemption from zymotic disease.*'
>
> "In the Dispensary Report for the year ending August 31, 1862, we compared the zymotic mortality of the five years from 1840 to 1844 with the zymotic mortality of the five years from 1857 to 1862, both inclusive, and found that, after the lapse of twenty years, and the expenditure by our Local Board of Health of not less than £130,000 (the gross amount borrowed and raised by rates was £154,000) in nine years, the zymotic mortality of the latter five years was only a small fraction less than the average zymotic mortality of the former five years, viz., 20·83 per cent. Another year has passed, and the estimated rate now being raised and spent is £14,352, and yet the average zymotic mortality of the last five years is 1 per cent. higher; whilst after an expenditure of nearly £170,000, the proportion of zymotics in the last of these five years was, as shown in the early part of this report, 27·34 per cent., or 6 per cent. higher!"

We should be sorry if one of the Nestors of our Profession, such as Dr. Cookworthy, were to leave our working ranks with such an ill-omened piece of counsel on his lips as this.

At present there are, respecting so-called zymotic disease, two classes of opinion; each true, yet each seeming to contradict the other. Wise men hold both, and reconcile them as well as they may; but the history of Medicine for many a year has been rendered ridiculous by those who would uphold one by itself and deny the other.

One party, the Sanitarians—(who, in their most virulent sectarian shape, degenerate into anti-contagionists, and were formerly the hacks and cat's-paws of Political Freetraders)—insist on the origin of pestilence in dirt, or, if not its origin, at least in its preservation, propagation, and intensification by dirty local conditions.

The other party may be divided, so far as the ultra and sectarian members of it go, into two sub-classes—the out-and-out contagionists and Quarantineers, and the Mystics or Know-nothings. The former disbelieve in any independent origin of any zymotic disease, and contend that each arises somewhere and somehow from some germ which has ever since been propagated from infected person to person. The other asserts that diseases are due to certain unknown conditions which are summed up in the term *epidemic constitution.*

Now we, as our readers know, contend for the truth of each one of these opinions in proper measure and place. With Dr. Christison, we think that sanitarians have been too ready to take for granted that the absence of zymotic disease during certain years is entirely due to "sanitary measures." Nothing, for example, can be more childish than to suppose that an epidemic of small-pox of unusual violence is due to "neglect of vaccination." True, the more unvaccinated people there are the more sufferers there will be; but this does not account for the outbreak in '63, rather than in '61 or '62. If there were neglect of umbrellas, a good many people would get wet, but this would not account for a storm. There are doubtless some *epidemic*, or, if it suits better, *pandemic* conditions yet undiscovered, which give to each special contagion by turns fits of unusual virulence and subsidence.

In like manner, when a contagious disease is imported into any place, it may spread, spite of all care and cleanliness; but a rigorous quarantine may keep it out.

But as for the proposition that dirt, though it may not be the origin of all zymotic diseases, and though it may require some atmospheric conditions to render it specially noxious, or though it may not produce some diseases without specific contagion, is yet the home, and nest, and lurking-place of many poisons, the fosterer of all; nothing is clearer to those who have practical experience of disease on the large scale. Sanitary measures simply mean cleanliness—the free action of air, water, light, and heat upon the human skin, clothes, apartments, furniture, and the removal and interment of all decaying refuse. Will Dr. Christison, or Dr. Cookworthy, or Dr. Hughes Bennett object to these measures as bad in themselves? Do they create disease, or give the sick a less chance of recovery? Are they better for the healthy, or worse? Do they tend to sobriety and the public good? If they are good in themselves, and tend to teach the people more of the value and dignity of human life, even though some enthusiasts may have expected too early and great results from them, let us have no more of this mean outcry against them, which is only worthy of the lowest parochial agitator.

Very likely some details may require correction. It is very doubtful, for example, whether the "water-closet" is an unmixed benefit in small houses inhabited by Irish and other ignorant people; so abused and stinking are they in such houses, that possibly the Rev. Mr. Moule's earth closets, and removal by cart would be better. For all this, we hold—in England, at least—that what has once passed through the human intestines may be dangerous and can never be pleasant; and this which is, as it were, the first proposition of sanitary science, seems not yet to have been accepted for gospel at Edinburgh.

THE GREAT UNPAID.

We learn that, after fifty years unremitting service, Dr. Cookworthy has retired from the office of Physician to the Plymouth Dispensary. His retirement was announced at the annual meeting of the governors, with Dr. Yonge in the chair, who formerly had been one of the Dispensary Physicians, and who, on giving up his post, most honourably refused to be made Consulting Physician, leaving that distinction to be conferred on Dr. Cookworthy whenever his term of office should expire. The governors unanimously voted their most cordial thanks to Dr. Cookworthy, and will no doubt, in due course, give him the honorary title which is his due.

We may remark, in passing, that this Dispensary relieves about 3000 patients per annum. The total receipts for last year were £742 2s. 8d., including subscriptions, £358, and something less than £200 dividend on accumulated capital. This year they laid by and invested £140, and have a balance of £30 in hand. The total ordinary expenses were £571 17s. 3d., or, as nearly as may be, 3s. 10d. per head of the patients.

"Of this number, 806 were visited at their own homes; 3 were supplied with irons for the support of weak or deformed legs; 47 with laced or elastic stockings for the relief of varicose veins; 17 with double, and 45 with single, trusses; 255 warm baths were given to different patients; and many had the benefit of water-cushions and other needful instrumental appliances."

Let us allow seven-and-sixpence a-piece for the irons, and trusses, and stockings, and a shilling for each bath. That will come to fifty-five pounds.

Now let us hear Dr. Cookworthy in the short speech in which he gave in his resignation:—

"I find that I have had the honour and pleasure of serving you for fifty years. My predecessor was Dr. Lockyer, and Dr. Lockyer died in February, 1816. Dr. Lockyer died of abscess in the brain, which, while it did not affect his general health, impaired his mind for more than two years before his death, and at the request of the committee I consented to be his *locum tenens*, without any vacancy being declared in our minutes. This was done in order to save the feelings of his friends. I kept that appointment until 1822, when it pleased God to remove Dr. Woollcombe, who was the senior Physician. The senior Physician is entrusted by the laws of the Institution with the management of the whole Medical department. Now, in such an establishment as this its officers and servants exist only for the benefit of those it is their business to relieve. Imperfectly as these duties have been performed by me—and nobody knows better than I—it is no small satisfaction for me to know that, after so long a time, the Institution is found to be in such a flourishing condition. *We are now able to give you eight tickets for a guinea instead of four, and each ticket entitles the patient to Medical relief for six weeks instead of three.* I believe and feel confident that so long as we do the business of this Institution faithfully and well, so long our efforts will be blessed, and we will be able to carry on the business of the Institution without begging or having recourse to sermons in churches, or to bazaars, where the world is called in to do the work of God. (Hear.) The public are satisfied; the sick poor are satisfied with the manner in which our business is conducted, and I believe they have every reason to be so, for it would be impossible for them to have greater care. Many of the subscribers, if overtaken by sickness, would not feel themselves called upon to do as much for themselves as is done for our sick poor, who can call in the senior Physician for consultation—(hear). The subscribers to the Institution are, perhaps, not aware that we are enabled to do much more than they enable us to do, by reason of the income we derive from our funded property. Each guinea subscribed does not do more than enable us to give relief to four patients, but, in consequence of the income we derive from funded property, we are enabled to give tickets for eight. There is one observation I wish to make with regard to the Workhouse. As the chairman has truly stated, they have withdrawn from us £30 a-year. But, on the other hand, they have dealt more liberally with the poor, for they have appointed four Medical officers with more than £60 a-year each. The business of this Dispensary is to afford Medical relief to a class of persons intermediate between the pauper and persons of independent means—(hear). Now, sir, in taking my leave of you in the capacity of one of your Physicians, I cannot help expressing my thankfulness to God, who enabled me to go through the work for so long a period. I am happy to say my health is better than I expected a few months ago it ever would have been."

We will only add ours to the good wishes which must follow Dr. Cookworthy, and our hope that he may long live to enjoy the memory of his half century of unpaid beneficence to the poor of Plymouth.

But there is another aspect of the question which intrudes itself rather unpleasantly. And here we will bring in an independent witness in the person of Mr. Leigh, Registrar of Deansgate, Manchester, addressed to the Registrar-General, and published in his last Quarterly Return. After some remarks on the fatalism, the apathy, the want of natural affection, and the ignorance which create so high a death-rate amongst children, he says:—

"Supposing the people to be sufficiently instructed in regard to these duties, and that they were careful not only to protect their offspring from disease, but to secure for them skilled assistance promptly when they were stricken, then starts up a strange difficulty in the Dispensary system by which a poor woman unable to pay for skilled attendance must lose a day, or perhaps several days of utmost moment in hunting for a 'recommendation,' without which the aid of the Medical officer of the Institution cannot be obtained; often when obtained it is too late to be of avail. It is the necessity for personal solicitation from subscribers which deters parents and others very often from seeking the requisite assistance from these otherwise excellent institutions. Many a poor woman have I seen drenched to the skin, cold, hungry, and weary, who had been all day long rambling from place to place seeking a 'recommendation' for her sick child, the little thing itself neglected at home, sobbing away its life, the husband and father wholly occupied in winning a bare subsistence. And what does the subscriber in nearly all instances know of the circumstances of the case, occupied as he is in large towns with his own affairs? Nothing; and yet he is required to do what he conscientiously cannot—vouch for facts of which he has no personal knowledge. Such a vexatious restriction does not accord with that charitable spirit which dictated the subscription. It is high time the system was abolished, for it almost annuls the charity. All that is requisite to meet the case is to have one or two additional resident Medical officers to each considerable institution. If these institutions are to be of their proper value the poor must be enabled to apply at once at the Institution for assistance.

"For all acute cases of disease the Dispensary system is useless, and in many instances worse than useless, by the waste of time it entails. So strongly is this felt by such of the poor as are unwilling to pauperise themselves by application to the overseer that they fall helpless into the arms of quacks."

We believe that the most efficient means of relieving the sick poor would be also that which would be most beneficial to our Profession, viz., to get the best men for parochial Doctors, and pay them well. No fear of pauperism would hinder the poor from applying to them, and the sick would be attended to at once by a properly responsible officer. The Plymouth Guardians in this respect have well done.

But if it be felt that this system is insufficient, and if there clearly be a class which ought to be attended gratis, and yet be spared the horrors, such as they are, of applying to the overseer, certainly the arrangements ought to be those of charity and not of *traffic*; or, if of traffic, our Profession should be considered a little, and not be the only loser.

With what face can a Plymouth tradesman receive in return for his guinea, which only pays for four sick persons, tickets for eight? Surely the Institution ought to be *free* to the extent of its funded property, and the subscribers have only such privileges as they honestly pay for.

Lastly, we know that Dispensaries (and the out-patient system at Hospitals) are, as a rule, as truly stated by Mr. Leigh, "worse than useless in all acute diseases amongst the poor," and most especially the zymotic diseases which have prevailed at Plymouth. For chronic illnesses, which do not disable the patient from walking, they are well enough, and to these should be confined. But to bring sick children out in all weathers, and to huddle a number of persons ill with all sorts of diseases into a fetid waiting-room, is a cruelty, and ought to be put down as a public and dangerous nuisance. Who can wonder at the spread of disease under such circumstances?

What is really wanted is a well-paid Medical officer to visit sick children at their own homes. But so long as pushing members of our Profession consider Dispensary appointments worth something as advertisements, and so long as Dispensary Governors be assured, even by Dr. Cookworthy, that the getting two guineas'-worth of Medical appliances for one guinea is a charitable and laudable act, so long will our Profession be robbed, and poor children die, and the public be gloriously humbugged.

GLASGOW AND THE ARMY MEDICAL SERVICE.

The last number of the *Glasgow Medical Journal* is noteworthy and amusing in some respects. It has done what it can to be upon the side of those who believe in the truth being found in a "glorious minority." A theory of the action of expectorant remedies by one professor is proved to be a delusion, and to have no foundation in fact by another professor in the same University; so far good, but all the Medical journals and everybody else are shown to be labouring under similar, but far more dangerous and culpable delusions, when they assert that the members of the Army Medical Department have had any grounds for their discontent. Unpopular ministries have before now owed their official existence to the enthusiastic support of one man; and it may be that the Army Medical Department will be upheld in its present state by the powerful advocacy of the *Glasgow Medical Journal!!* Great political services occasionally receive great rewards, and the writer of the article in question has our best wishes; for sure we are, that if the amount of service rendered is to be measured by the need for it, then there can be no doubt of the importance of the advocacy of the army as a Medical service at the present moment.

We venture to disagree with the conclusions and inferences suggested by our contemporary, not so much in the truth of what has been said, but as to what has been left unsaid. It is not by any means singular for a paper to be "conspicuous for an absence" of the facts that won't square with the views advocated; and it is not the least curious trait in the writer that he has, by way of peroration, conceded in a great measure the truth of statements, against which he has fiercely tilted through twenty pages of letterpress. In nine lines he, by way of a conclusion, dexterously saws off the end of the plank on which he is seated!

We propose to discuss a few points in the above-mentioned paper.

We are by no means certain that "under the present system *all* Medical officers may look to a fair rate of pay and a good position after twenty years' service."

If an *Assistant-Surgeon* went to a trial at law, for instance, with the Government authorities for not having promoted him at the end of twenty years' service to the rank and pay of Surgeon-Major, and rested his claims upon the 22nd clause of the Medical Warrant, we humbly think that his cause wouldn't hold water. However this may be, will our Glasgow friend take a glance at the last Army Medical Blue Book (which has just been sent us), from which he may cull a few flowers of so sweet a promise as to bring the Medical Department at once into good odour!

"On the 1st of January, 1861, there were 1033 Medical officers on full-pay. During the year 22 Assistant-Surgeons entered the service; 15 Medical officers died; 9 resigned; 8 retired upon permanent half-pay (7 from ill health, 1 from other causes); and 27 were placed upon temporary half-pay on account of illness."

A mortality of 15, and such an amount of sickness as to result in the permanent or temporary loss of the service of 34 men out of a strength of little more than 1000 Medical officers, sufficiently indicate the unhealthy nature of the duties and mode of life to which members of the Department are exposed.

At the conclusion of the same Medical Report we are furnished with a list of the Medical officers, arranged according to the dates of their commission. From 1860 to March, 1863, the promotions from the rank of Assistant-Surgeon to that of Surgeon have numbered 39, which represents a rate of about 10 per annum. By this same document we discover that there are 146 names above that of the Assistant-Surgeon who heads the list of 1855, so that *he* may expect his promotion (at the present rate) in about *fourteen years from this time*, by which period he will have served her Majesty *for twenty-two years as an Assistant-Surgeon.*

Now, the Glasgow advocate must agree with us in thinking that the official net may be cast into every water, and the requirements of the Department may be advertised far and wide, so long as these prospects and advantages are offered, without any chance of securing the best men—those who are peculiarly needed for Army Medical Service at the present time. It has been justly said that the army is not a *paying* profession in any of its branches, and that this evil falls equally upon the combatant and non-combatant officer. If the former be content to serve under this disadvantage, and to seek a reward in other than mere pecuniary benefits, so must the Medical officer. This kind of reasoning does not, however, quite apply. The combatant officer is a younger and less trained, though more "moneyed" man, than his Medical brother, and the attractions of a military life, and the love of command, will always tempt a great many young men to the profession of arms. While the Medical and combatant officer therefore start differently, and seek different ends, we find the combatant officer enjoying one advantage. A young fellow gets a commission as an ensign; after a certain number of years (even without purchase) he may get his company. Supposing him to be so far fortunate, his commission as a captain represents a money value, and if he wishes to retire from the service, he can do so by sale of that commission, thus pocketing a certain, though small sum of money. No Medical officer, however fortunate, can retire after ten or twenty years' service with anything, unless he does so on half-pay, from loss of health.

The subject of "relative rank was truly the cause of the present angry agitation," but it was not the "*sole*" cause. In that question was involved one of greater importance, and it was this,—Was the Government at liberty to break faith with its servants? It cannot be denied that some men—and some of the best men, too—entered the service under the terms of the Warrant of 1858; nor can it be denied that the Warrant of 1861, by cancelling a single promise, had broken faith with these men! There are many men who think—very erroneously think, say some—that there is an animus on the part of the Horse Guards against the Medical branch of the service, and they viewed with dismay the evidence afforded by the authorities that this feeling was not unfounded; they turn from the Queen's Warrant to the Regulations for Allowance of Baggage, and they find unpleasant diversities. It is as ridiculous as it is unfair to represent Medical officers as seeking for military command; what they *do* want is a defined position, and that rights guaranteed by one official document should be recognised in another. The evidence that a Medical officer's social status is regarded with a jealous eye by the combatant, needs no further comment than a reference to the Field-Officer's letter which lately appeared in a military paper. Although this was not evident to the Glasgow *Medical* writer it seems to have been so to the *Barrister*, who has kindly answered the Field-Officer's effusion.

Upon the subject of "tattooing men" we are surprised that a writer, who claims to be logical, can have so misrepresented what has been said. It is *not* because the duty is *disagreeable*, but because it is *improperly performed*. It is a punishment carried out by *an attendant on the sick, at the Hospital*, in the presence of *one* commissioned officer only, and that one the Surgeon, carried out, too, in a way that cannot fail to leave an impression upon the mind of the soldier that the Hospital is the place of, and the Medical officer the agent for, infliction of a punishment. Every communication that we have read puts the case distinctly, and in no instance has it been contended that a Medical officer should be absent from any duty required of him, provided that in its performance his position and functions are properly recognised. "Nothing can be considered degrading to a man which comes in the way of duty." That we deny; if it became the Medical officer's duty who wrote those words to direct the Hospital serjeant in properly flogging a soldier at the Hospital—if he had to supply the cat, and to certify that it had been efficiently applied, that would be a *duty*, and a most *degrading* one!

The writer may say what he will about the Medical service in India, but the fact remains that the Medical officers have been unjustly treated. What they demanded was "so expressed in the bond;" but they have been denied the justice meted out to Shylock without the good logical and legal grounds by which that merciless Jew was balked of his "pound of flesh." The authorities may hail their staunch Medical defender as "a Daniel—a second Daniel—come to judgment;" but these words had a very different significance when used by the different characters in the play.

We may conclude with a special word to our northern friend and one to our readers.

We would, then, recommend him to ventilate his "nerve terminations" in the "pleasant society" he seems to have discovered in the army, and not to venture out of a sphere where his views must meet with a large amount of applause from a congenial audience.

To the reader we would say, no doubt some of the alleged grievances have been exaggerated. Such can scarcely fail to be the case where a body of men consider themselves aggrieved. We, as Medical journalists, desire to see the public services keeping pace with the advance going on in the Profession itself, and that, to say the least of it, is not the case at present.

We have heard it whispered—with what truth we cannot say—that, as the authorities have been foiled in their attempt to procure good and well-educated men at a cheap rate, they have been advised to sacrifice the quality of the article to the needs of the service and motives of economy. It is thought that the abolition of the present system of competitive examination would answer one end, viz., of enlisting a larger number of candidates. It cannot be pretended that such an increase of quantity could be so purchased without a very manifest deterioration in quality, and we venture to think that the authorities will not be so forgetful of their duties to the State and the interests of the service as to sacrifice these to a miserable principle of parsimonious economy.

That the best article is the cheapest is true in most things, but emphatically so in things Medical. We must have good and competent Surgeons for our army if we are to avoid loss of life, misery, sickness, and great expense in the present time of peace, and a disgraceful break-down in any future time of war.

PROPOSED UNIVERSITY FOR WALES.—The project of establishing a University in Wales seems likely to be carried into effect. A committee is being formed, and a subscription list is to be commenced. Mr. Williams, M.P. for Lambeth, has promised £1000.

THE WEEK.

FRENCH VIEWS OF ENGLISH SURGERY.

IN the *Montpelier Medicale* of last month, we find the last of three letters by Professor Courty, giving an account of a Surgical excursion in England. In it he sums up the impressions derived from his examination of our Medical institutions. Some remarks on vesico-vaginal fistula and perineoraphy give in detail the operations of Mr. Spencer Wells and Mr. "Backer Brown." Chronic uterine inversion seems to have especially occupied the writer's attention, for he not only consulted Dr. Simpson and Dr. Tyler Smith on the subject, but made researches in our museums and libraries. Of the British Museum, he says:—

> "I have had reason to admire the extreme politeness of the officers employed in the fine library of that institution; and as every pleasure has its corresponding pain, so I carry back with me the regret that I could not more often or for a longer time make profitable use of the richness of the collection, and the infinite attentions of the librarians."

Congenital atresia of the vagina, and operations for its relief, by Dr. Simpson and Dr. Greenhalgh, receive mention, as well as stem-pessaries and modes of gradual dilatation in uterine complaints. The various trocars employed to puncture ovarian cysts, metallic sutures, acupressure, resections of bones, and chloroform, are passed in review, especially the frequent use of the anæsthetic in our country.

> "It seems," he says "as though there is more familiarity than in France with the management of this precious and terrible agent, or that the English character produces in the patient, as well as in the Surgeon, a more formal decision to run the risks of the new danger, in the hope of gaining an inestimable advantage."

Medical instruction in England is commented on with considerable detail, the writer acknowledging his obligations to M. De Meric for information on a subject necessarily complicated to a foreigner. The fundamental differences between the French and English systems of teaching are referred to the difference in the genius of the two nations. We are accredited with "two principles whose concrete manifestations give a characteristic stamp to our public and private life, as well as to our course in the great path of civilisation." The first of these is "a broad and complete recognition of the power of human will, the free exercise of which is always admitted within the limits of legality; the second is the continuity of that will, perseverance, the spirit of persistence, whence springs the force of habit, the permanence of custom, and the stability of our institutions."

The writer finds these principles expressed in our Medical teaching in—

> "1. An extreme freedom in instruction and practice; the former voluntary, given in all quarters by private corporations, the latter carried on by individuals, or, at least, by the societies to which they belong. 2. An organisation entirely based on custom and tradition, almost without any bond connecting it to the Government, and with fashions which seem to Frenchmen so obsolete that their spirit of centralised administration and of university discipline finds a difficulty in comprehending its machinery."

The recent Medical Act is noticed with commendation, and some facts are given respecting the history of the various Colleges. The establishment of private Medical Schools of a practical character, and mostly attached to Hospitals, leads to a favourable comparison of the facilities afforded for clinical study among us, with the difficulties thrown in its way in France.

The opening of Hospitals to students is attributed to "a generous liberalism," throwing wide its doors to science as well as to misfortune, and allowing the poor patients who obtain relief from Medicine and charity to give in return what is in their power. It is also referred to "an enlightened interest," for the crowd of pupils stimulates the zeal of masters, the reputation which teaching contributes to give the Medical staff causes their posts to be more in demand, and ensures their being better filled, increasing at once the usefulness and the estimation of the institution.

The period of the Medical session is stated, and an admission made that by the French system of opening on November 15, six weeks of the year very favourable for dissection are lost; whereas the months of July and August are practically worthless, though the French session nominally continues till September.

The Army Medical School is noticed as a judicious imitation of French example, and the non-existence of a Naval School is deplored. The common confusion abroad as to Medical titles is explained, and the absence of competitive examinations for professorships adverted to. "In the Universities," says the author, "merit almost always, in the private schools, private arrangements," determine the elections.

The concluding paragraph is quaint and characteristic :—

"As a general summary, universities, special schools, always independent; corporations of Physicians, Surgeons, of 'Apothecary-Doctors' (Pharmaco-Medecis), freedom for any man to prescribe and furnish drugs, but not to take the title of Physician or druggist. Such is the chaos, at least in our point of view, of which the disentanglement seems beginning in England. But throughout it all, freedom of teaching, liberty in practice, supreme control in the corporations, such is the principle, such is the spirit, which presides over the Medical development of this country."

There is much to be learned from honest but friendly critiques like this, and with the less humiliation as the writer warmly acknowledges our kindness, affability, and hearty hospitality to a foreigner.

PSYCHOMETRY.

Spiritualism has undergone a new development. Satiated with the commonplace and fruitless triumphs of bewitching furniture, floating in the air, and interpreting raps, the mediums have made a fresh start, and now announce that they have acquired the power of reproducing in all its vividness and completeness the mysterious past. The process by which this is accomplished seems an easy one. It is called psychometry, and the favoured few who possess the retrospective power are known as psychometers. Most, if not all, the psychometers are feminine, and American. These gifted ladies, by merely touching a piece of anything—be it bone, or stone, or aerolite, or even a fragment of crockery—can immediately tell all that has ever happened to it. In the case of a piece of bone, contact immediately informs them everything about the animal to which it belonged, the circumstances under which it lived, the scenery and conditions by which it was surrounded, its habits and sensations. And this is not all. The psychometer is transported at once to the part of the globe which the animal has inhabited, and is able to describe all the features of the journey. Or if it be a stone she can directly give information as to its geological belongings, the formation whence it was derived, the place from which it was taken, and all the vicissitudes it has undergone. Mere handling is enough, but usually the psychometers place the substance in contact with the forehead. One lady, by sitting in the moonshine and allowing the beams to play on her forehead, got such an insight into the structure of the moon that she immediately described it in full to the astonished bystanders. Mrs. Denton, of Boston, U.S., thus described her sensations on having a whalebone cane applied to her forehead :—"I feel," she said, "as if I were a monster. I feel like vomiting. Now, I want to plunge into the water. I believe I am going into a fit. My jaws are large enough to take down a house at a gulp." Another, on being placed in contact with a boulder, expressed her feelings thus :—"Mercy! what a whirl things are in! I do not know what to make of it. I feel as if I were being belched out of a volcano. Here is water and mud, and everything is in great confusion. There are great pieces of rock beside me, some larger than I feel myself to be, though I am of great size. I am sent up whirling in a torrent of water, mud, and rocks; not sent out at once, but in alternate puffs, and all of us flying round together." Of course as the vicissitudes to which matter is subjected are numerous, the ladies describe their sensations as somewhat complicated, but they tell us that by an effort of the will they can fix for a time the more interesting scenes as they pass before them. This, no doubt, is a fortunate and pleasant thing for the psychometers. As the dust of "imperious Cæsar" may stop a bung-hole, the passage of the Rubicon would be a more striking experience than a lengthened vision of a beer barrel. And we should hope, for the lady's sake who was mentally metamorphosed into a whale, that she did not permit the qualmishness and threatening fit to last long. We wonder, by the way, whether these are the normal feelings of whales. The husband of the fair cetacean asserts that this experience was accompanied by universal shuddering,—but this might perhaps be accounted for by the cold sea-bath in which she was psychometrically plunged. We really congratulate the mediums on having struck out a new path. It is true that for many the mysterious future has even a greater charm than the mysterious past, but the former is somewhat a used-up region, the field of prophetic vision being already occupied by Zadkiel and numerous other seers, lay and clerical. We would only observe that in adopting the opposite course the mediums have taken the field against science, and the latter must look to her laurels. Alas for Owen, Falconer, Huxley, and the doughty *savans* who Sampson-like have attacked an unbelieving world with the Abbeville jawbone! Their occupation's gone. It was thought a wonderful feat to construct the skeleton of the Dinornis from merely looking at a piece of its femur; but what is this to being able to give a description of a vast number of animals of the tertiary era, whose existence is as yet unknown to geologists? We are very anxious to know whether this resuscitated fauna would supply the missing links for Mr. Darwin. A full view of the early inhabitants of England has already been vouchsafed to one lady, and we have the satisfaction of learning that they were "scarcely human, incapable of standing upright, though formed so as to sit comfortably; very hairy, with a good deal of fun and frolic, and with a crescent-shaped mouth." All these, and many more wondrous revelations are seriously recorded in a book entitled "Nature's Secrets; or Psychometric Researches," written by a Mr. Denton, who styles himself a Lecturer on Geology at Boston, and edited by an anonymous English clergyman. Truly these gentlemen must have formed an exalted estimate of human credulity!

FROM ABROAD—THE ITALIAN MEDICAL ASSOCIATION—ITALIAN TRAVELLING FELLOWSHIPS—TYPHOID FEVER IN PARIS—DISTRIBUTION OF PRIZES AT THE SALPETRIERE—DISCUSSION ON HYDROPHOBIA.

The second Congress of the Italian Medical Association, held at Naples in September, has gone off very satisfactorily. The serenades and orations which accompanied it may seem a little out of place to our northern temperaments, but business was not neglected. Committees were appointed, and resolutions come to, tending to strengthen the ties of Medical relationship. Among other things, it was determined to publish an official bulletin, to found a benevolent fund, and to investigate the projects for organising the Medical attendance on the poor in the rural districts. A committee reported that laying down a tariff of fees for private practice would be a useless and inopportune procedure, in face of the great varieties of place and social relations,—a sensible resolution, which was at once agreed to. The proposition of another committee, to admit midwives into the Association, gave rise to a lively discussion, terminating in its rejection, as contrary to the statutes of the Society. As to the place of its next biennial meeting, the Association pronounced for Rome by acclamation, providing that, by the time of meeting, this city has become the capital of Italy. To provide for all contingencies, however, if this does not come to pass, Florence is to be the place selected. Among the propositions reserved for future discussion are, that necessitous families of Medical men dying in consequence of exposure to contagious disease in service of the State shall have claims on the municipalities; that the various Hospitals of a city shall be placed under a central supervision; and that reforms are called for in the Army Medical service.

Another gratifying piece of news from Italy is the publication of a Royal decree establishing Travelling Medical Fellowships of 2400 francs each in the Universities of Bologna, Palermo, Naples, Pisa, Pavia, and Turin, for the purpose of sending students who have distinguished themselves to complete their education by visiting the Schools of foreign countries. The selection is to be made by *concours*; but the Minister of Public Instruction has the power of direct nomination to some of these appointments, and he has just selected for the first of them Dr. Christoforis, a distinguished young Physician of the Milan Hospital, and one of the editors of the *Annali Universali* and *Gazetta Medica di Lombardia*. He is to repair to Vienna, and will doubtless have to report upon the state of Medical instruction in that capital. There is much worthy of imitation in this procedure, and we would call the attention of our leading Medical Schools to it.

Some time since we noticed the fact of a Paris Medical journal being compelled, by the operation of the French laws on the press, to eat its own words, without comment or explanation, with respect to a statement it made as to the high mortality from typhoid fever then prevailing, which was characterised by those in power as a gross exaggeration. Both the original statement and its contradiction may have been, in fact, correct, if they were made to apply to different periods of the epidemic; for we find M. Lallier, in the periodical reports he makes to the Paris Hospital Society on the prevalent diseases, stating that the mortality from typhoid fever did, in fact (as stated by the journalist), amount to the tremendous figure of 35 per cent. during July, while the proportion for the whole course of the epidemic, during the months of July, August, and September, became reduced to 16 per cent. Still, at the outset of the epidemic, one in three or four patients died in the practices of MM. Bourdon, Cazalis, Trousseau, and others.

An interesting ceremony has been recently conducted at the *Salpêtrière*, under the auspices of M. Husson, Director-General of Public Charities, and M. Moreau, Medical Superintendent of the Epileptic Patients. It consisted in the distribution of prizes to the idiotic and epileptic girls who had most distinguished themselves by their assiduity and by their proficiency in the gymnasia. This annual festivity is always looked forward to with the greatest impatience by these unfortunate children, as is that at the *Bicêtre* by the boys similarly circumstanced; but, with the exception of a few of the relatives of the patients, it is always conducted with privacy, it not being thought desirable to stimulate the children by any public exhibition. The proficiency exhibited in the gymnasia by the epileptics and hysterico-epileptics was remarkable, and M. Moreau reports that most satisfactory and even permanently good results have attended perseverance in these well-ordered exercises; while more than a half of the children, subjects of imperfect cerebral development, have exhibited notably the benefits of the educational cares that have been bestowed upon them. The decorations and prizes were of the simplest character, but sufficed to excite the degree of emulation deemed desirable.

At the discussion on M. Bouley's report, M. Tardieu drew attention to the important investigations respecting hydrophobia in France which had been instituted by M. Dumas in 1850, and continued to the present time. From these it results that 319 cases have been observed during the years 1850-62, *i.e.*, about 24 per annum. In 214 of these cases, in which the situation of the bites were specified, they were inflicted upon the upper extremities in 122, upon the face in 54, and upon the lower limbs in 38 cases. Although he finds this part of the subject surrounded with difficulties, M. Tardieu believes Hunter's statement, that only 5 per cent. of the persons bitten contract hydrophobia vastly under the truth, and only to be explained by including non-rabid bites. Of 334 persons returned as bitten by undoubtedly rabid dogs, he finds that 185 contracted the disease, *i.e.*, 55 per cent. He also believes that the disease may originate spontaneously, and shows that the immunity from it said to have been obtained at Berlin of late years cannot be due to the muzzling, which, in fact, has never been rigorously enforced there. The Berlin veterinarians themselves believe that the explosions of the disease are due to epidemic influences. M. Boudin's statement that rabies was unknown in the East and Algeria until communicated by European dogs has been proved to be erroneous. The period of incubation of hydrophobia, carefully noted in 224 cases, was less than a month in 40, from one to three months in 143, from three to six months in 30, and from six to twelve months in 11 cases. In children it has been as short as fifteen or even thirteen days, and rarely extends beyond twenty-five or thirty days. M. Tardieu does not attach so much importance to police regulations as to making the public familiarly acquainted with the early symptoms of rabies During the six years prior to the tax being laid on dogs in France, there occurred 164 cases of hydrophobia, and there have been 104 cases during the six years subsequent to that imposition. In conclusion, M. Tardieu finally called attention to the vast importance of effectual cauterisation, this having been neglected, delayed, or imperfectly performed in 195 cases met with in 1852-62; while among 143 persons, subjects of rabid bites, of 63 who did not contract hydrophobia, 35 had been promptly and effectually cauterised.

M. Vernois cautioned the Academy against the too indiscriminate use of statistics in reference to the various points of discussion on hydrophobia, seeing that things are compared having no elements of comparison about them. Thus, the fact of only two cases of hydrophobia having occurred in the department of the Seine in the years 1848-58, while fifteen cases were met with in the years 1860-61, is the result of mere chance, much depending upon the varying number of persons bitten by the same dog. The losing sight of the difference between mere bites and real inoculations explains the discrepancy in the statements of the percentage of the results. M. Vernois is convinced that rabies may arise spontaneously, and urges the importance of the fact being made known, in order that false security may not be indulged in. How little the tax imposed on dogs can have to do with the prevention of the disease in France is shown by the fact that during the first year of its imposition only 40,000 out of 1,700,000 dogs disappeared, while by the second year all but 2345 of the original number reappeared. With respect to hydrophobia, M. Vernois is of opinion that we do wrong in confining our attention to the terminal period of the disease, when the fatal symptoms explode, neglecting the incubatory or prodromic period. Internal treatment should logically be commenced at once, and the therapeutical agents most likely to be of avail are those which exert marked, persistent, and rapid modifying power on the blood, *e.g.*, iodine, quinine, arsenic, mercury, etc.

M. Leblanc, a veterinarian of forty years' standing, is convinced, from close observance of rabies, that it more often arises spontaneously than through communication, and he is convinced that a great cause of its production arises from the restraint put upon the sexual desires of the dog. A curious fact in confirmation of this is stated by M. Sace, viz., that on a portion of the course of the Danube, the Christians on the one side of the river have chiefly male dogs, and there rabies is common; while on the Mussulman side, where, as in the East generally, dogs of both sexes are left at liberty, the disease is unknown. Fancy and pet dogs, which are kept under most restraint in this respect, and are well fed, are those most liable to the disease. The great preponderance of the disease in the male is shown from M. Leblanc's own practice. Among 10,710 dogs entered upon his books, 30 per cent. of the number were bitches, or a little less than a third; but of 159 of this number, the subjects of rabies, only 25 were females,—a mean of 1 female to 14 males.

M. Beau related to the Academy the particulars of three cases of hydrophobia which he had witnessed, in order to show that the symptoms of the disease may exhibit great variety, and that several of them resemble those met with in the dog. In one of these cases remarkable induration and turgidity of the brain coincided with rigidity of the whole muscular system, the subject of it dying in a paroxysm of the most furious delirium ever witnessed. M. Beau refers to another case on record in which a similar firmness of cerebral structure coincided with violent fury; and this co-existence of maniacal delirium with cerebral induration has been also noticed by Morgagni and Falret.

M. Gosselin, in answer to the question of what ought to be done when we first see the patient only some days after he has been bitten, related an interesting case which came under his own care. A girl, aged 18, was brought, in 1859, to the Cochin nine days after having been bitten in the fore-arm by a dog which afterwards died undoubtedly mad. The small wounds made, now in a state of full suppuration, were deeply cauterised with the butter of antimony; and M. Gosselin, recollecting that the quacks who professed to prevent this disease, besides the absurd means they made use of, advised as accessory measures procedures such as exercise, sweating, purging—the truly efficacious ones, if any were so—resolved to give such means a trial in this case. A vapour-bath, for thirty or forty minutes, twice a-day, two or three hours of rapid exercise in the garden, with short intervals of repose, and a daily purgative, were prescribed, together with a substantial diet. The patient submitted to this treatment with good will, and it was continued for thirty-five days, after which time it was diminished in severity, the girl leaving the Hospital in the ninth week. She has since been repeatedly seen quite well. M. Gosselin, well aware of the objections which may be taken to considering this treatment as having been really preventive in the case, thinks it gives encouragement for future efforts in a like direction. M. Piorry drew attention to the great resemblance which exists between the course of the symptoms observed in this disease and in tetanus. With respect to treatment, he recommends, after the destruction of all parts immediately surrounding the bites, that a blister should be applied to the circumference, and dressed with narcotic preparations, which should also be applied in the course of the chief nerves communicating between the wound and the nervous centres. On the occurrence of the paroxysms, he would chiefly rely on quinine, chloroform, and electricity. M. Bouley replied at great length, but his address, though highly interesting on perusal, chiefly consisted in amplification and illustration of the opinions he has already advanced, and which we adverted to in our former notice.

Royal Institution of Great Britain.—General Monthly Meeting.—Monday, November 2, 1863.—The Rev. J. Barlow, Esq., M.A., F.R.S., Vice-President, in the Chair. Captain Douglas Galton, R.A., F.R.S.; Leonard Jaques, Esq.; William Noble, Esq.; the Hon. Josceline W. Percy; Allan Roskell, Esq.; and William Sterry, Esq., were elected Members of the Royal Institution. George Henry Strutt, Esq., was admitted a member of the Royal Institution. The presents received since the last meeting were laid on the table, and the thanks of the members returned for the same.

ON THE

INFLUENCE OF RACE ON THE RESULTS OF SURGICAL OPERATIONS.

By M. CHAUFFARD.

[We have several times adverted to the ingenious speculations of our French *confrères* concerning the difference in the results of operations performed in England and in France, and we think the following communication upon the subject, which appears in the last number of the *Gazette Hebdomadaire*, will prove of interest to our readers.]

A prominent fact results from the discussions which have taken place at the Academy which we cannot allow to remain in the shade,—viz., that operations succeed better in the English Hospitals than in our own. English Surgery is more bold than French Surgery, even rash, and yet its results surpass those obtained by the latter. Statistics, beyond all criticism, prove this, and they have failed who have sought to enfeeble their testimony. The difference exhibited is neither accidental or unimportant, but constant and considerable, being not less than from 15 to 20 per cent. We must admit the fact, then, painful as it is to do so, and, having admitted it, we have to look for its cause. This can neither lie in the want of skill of our operators, nor in any absence of care in their after treatment. The French Surgeons all now comprehend the importance of the latter, and recognise its decisive influence on the success of operations. Nor can it be attributed to the unsanitary condition of our Hospitals, which for the most part are superior to the English Hospitals. We have only to reduce a little the number of beds in some of the wards to attain a sanitary condition which, if not irreproachable, cannot at least have imputed to it these constant and repeated misfortunes. The cause of these shortcomings of French Surgery has, in our opinion, been scarcely touched upon in the Academy, M. Velpeau, one of the greatest authorities of that body, it is true, having alone indicated it in some words quite of a professional rudeness. "How comes it, then," says this eminent Professor, "that surgical operations appear to succeed better in England than in France? Supposing the fact to be well authenticated, I do not believe that we should seek its explanation in the difference of regimen of the patients or in the hygienic conditions of the Hospitals. It would perhaps be more correct to admit a sort of immunity in favour of the English *flesh*, which, by a kind of physiological privilege, proves more refractory than the French flesh to the accidents which ensue on great operations."

This idea, which opened a new horizon to the debate, was not taken up, and excited no further notice. Yet, in our opinion, it is the true clue to the facts. The success which attends great operations in England is, before all things, a question of race. Englishmen operated upon in France would recover with the same good fortune as at home, while we Frenchmen would in England meet with the same fatal accidents which for us compromise the success of the best conducted operations. If attention had been directed in this quarter, facts would not be wanting to attest the truth of this statement. Civil, Hospital, and military practice might each furnish direct and undoubted proofs, which, taken together, must carry conviction. We cannot at this time have recourse to all these sources, but, in order to bring out this important truth, we will just trace the sad and recent experiment made by French Surgery from the example and instigation of her rival on the other side the Channel. I allude to ovariotomy. . . . . . In order to remove these enormous tumours we are compelled to largely open the abdomen, and to manœuvre within the depths of the most vast visceral cavity, the one most disposed to inflammation, and the inflammation of which is the most redoubtable of all. The necessities of the operation often give rise to prolonged and multiplied manœuvres, to extensive lacerations, and to almost violent struggles, with the resistances which may arise. Such is ovariotomy in its sombre and too real physiognomy. This formidable operation was first practised, and with success, in France towards the end of last century, and an account of it is found in the *Mémoires de la Societé de Médecine* for the years 1782-83. Since that time, however, our Surgeons have not renewed the attempt, fortunate though this was. Calculating by their daily practice what their art allowed them to attempt, they deemed a like operation beyond the powers of Nature herself, and would not allow an exceptional case to be converted into a law, sacrificing numerous victims for the chance of meeting with an unexpectedly successful result. With good reason, such success did not seem to them to offer a sufficient compensation for the calamities by which it must be purchased. They renounced the extirpation of ovarian cysts, and treated them by repeated tappings, and in later years by iodine injections, which, in cases of simple unilocular cysts, not infrequently lead to a durable cure.

The operation proscribed among ourselves, became, however, gradually adopted in America and England, the Surgeons of these countries declaring that they did not meet with the terrible accidents so redoubted among ourselves, while they frequently obtained the cure of a disease almost always fatal. As long as these statements only came to us from the other side of the Atlantic,—the distance that intervened, the incredible rashness of American Surgery, the absence of control in a society in which individual liberty reigns as absolute mistress, the excesses of charlatanism and hasty publication, and our ignorance of the true value of the men who spoke and wrote —all these circumstances rendered us very incredulous, and we remained peaceably amidst our traditions of timid Surgery; but when cases came to us from the other side of the Channel,—when we saw London Surgeons of repute practising ovariotomy, bringing it within the category of legitimate operations, when we learned their successful results, and were enabled to control these, and when verified statistics swelled their unexpected number—emotion overcame us, and the spirit of resistance gradually gave way. Several of our most distinguished Surgeons repaired to London, examined patients already operated upon and cured, saw the operation performed, followed up its results, and had all doubts removed from their mind. Ovariotomy they declared to be a beautiful conquest of modern Surgery, and they returned home decided to render it popular among ourselves.

These occurrences took place just at the time when the Hospital question was being discussed in the Academy. The unsanitary conditions attributed to our Hospitals, the mischievous effects of overcrowding upon those who had undergone operations, and the importance of hygienic and consecutive treatment—all these points, brought into relief during the debates, were taken into serious consideration by those who were desirous of introducing and naturalising in France the Surgical achievements of our neighbours. The most minute precautions were taken before proceeding to the operation, and the patients were placed either in the country, in *maisons de santé* in the neighbourhood of Paris, or, if in Paris itself, in separate, well-ventilated rooms, uniting every imaginable condition of salubrity. Alas! in spite of all this care, the check which our Surgeons have received is lugubrious. The splendid recoveries observed in London have not been obtainable here. We cannot state in a very precise manner the number of women who have been subjected to ovariotomy, but it has been sufficiently large to render the proof decisive. A more or less speedy death has been the termination of most of these attempts, skilfully as they have been conducted. Scarcely have some rare cases proceeded on to a favourable result; and even the recoveries themselves do not exhibit the moving spectacle witnessed by the English Surgeon of fearful and complicated manœuvres combined with terrible accidents, yet followed by a cure taking place amidst a state of calmness with a surprising facility. Thus it is that our Surgeons, discouraged, will for the most part recur to their former timidity, some of those who were at first the most ardent in the attempt feeling now no disposition to repeat it.

In face of these facts, what are we to think, and what conclusion are we to draw, other than that the Anglo-Saxon race possesses in a higher degree than our own the faculty of bearing severe traumatism without succumbing. There is the same distance between that race and ours as there is between the negro and the Anglo-Saxon races. If there are many cases of recovery after ovariotomy among the Anglo-Saxons, so are there many deaths; and, putting aside all exaggerations of some statistics, we find that, of the total number of operations, little more than one-half only are followed by recovery. But in America, practised upon the negress, the operation seems almost inoffensive, to such an extent is recovery the rule and death the exception. This shows that the influence of race is sometimes decisive, and Medicine and Surgery must submit to the exigencies and the special indications which hence arise. The same science and the same art are not suitable for populations who live, feel, and react so differently. We might support the above conclusion by some very striking facts, but we abstain, so plainly does the experience speak which has been derived from our imitation of English practice. The truth, moreover, begins to penetrate the minds of those who have occasion to appreciate the result derived from English Surgery, and to compare them with our own. In a recent distinguished work ("Traité de Chirurgie d'Armée") published by M. Legouest, Professor of Clinical Surgery at Val-de-Grace, this skilful operator recognises the superiority of English Surgery to ours during the Crimean campaign—that is to say, a superiority with respect to the proportion of successful cases. The difference is indeed great, for while our allies lost 27 or 28 per cent., we lost from the same operations 70 per cent. M. Legouest invokes many causes in explanation of this painful difference, all drawn from the circumstances of the moment, and all in our opinion insufficient. Indeed, he feels this himself, for after enumerating these various probable causes, he adds, "Perhaps, in order to embrace all the elements of this question, we should take into consideration the effects upon the results of operations which may be derived from the race of the men who undergo them, their hygienic habits, and their alimentation. This is a last resource for explaining in a general manner the success of English surgery, which sometimes seems well nigh prodigious." This last explanation is in fact, the true one, and the only plausible one in the face of facts which are constantly met with in civil and military practice, and the French Surgeons will have the consolation, in accepting it, of believing that they are not wanting to their mission, and that their absence of success is due to superior causes whose power they are unable to control.

Moreover, the aptitude to endure the shock of excessive traumatism is a feature which harmonises singularly with the moral physiognomy of the Anglo-Saxon race. This strong and persevering race, so immovable in its habits, resists with a remarkable assurance the disturbances which are produced by events which excite it, and by accidents which occur to it. Calamities do not overwhelm it, or put it into confusion, for confident in its strength, it never despairs in the struggle. It resolutely accepts sacrifices, and transforms into an act of the will the burden which is imposed upon it. The individual in this race, both by nature and by education, is habituated to rely upon himself, and remains his own master, not allowing himself to be driven or led away farther than he determines. After taking part in the most violent public excitement, he incontinently resumes his ordinary calmness, the movements to which he had abandoned himself with passion ceasing at his will, without leaving behind them any disposition to disorder or dangerous exaltation. In a nature of this kind, in which organic and stable forces are predominant, and which is tormented by no exaggerated sensibilities, great operations and serious traumatic accidents are borne, both physically and morally, with an impassability which favours recovery. This impassability is not merely apparent and superficial, but real and radical, the injured organism resisting mischievous excitation and compromising reaction, tends without disturbance towards reparation, the undistracted plastic power silently accomplishing its salutary abours.

How striking the difference exhibited by other races, and especially the French race—the most sensitive, the most excitable of all! Among us every physical emotion, every local disorder, resounds noisily throughout the entire economy. Reactions are lighted up with remarkable promptitude, and are ill sustained, becoming disturbed on the slightest shock and perverted under the slightest hurtful influence. Our vital sensations, strongly excited, constantly pass all bounds, can no longer be restrained, subdue and carry us away, and leave us irremediably exhausted. Our imagination vibrates in unison with our nervous system, aggravating its disorders. Just as we are fiery and intrepid in action as long as fortune befriends us, so do we fall into despondency and rapid discouragement as soon as reverses overtake us or accident arrests us. We are of those who while knowing no obstacles, yet abandon ourselves to the most groundless panic. That reason and just appreciation do not govern our actions is at once a trait of our strength and of our weakness. Some exciting the others, we deem ourselves invincible, but isolated by calamity, and attacked as individuals we become discouraged and hesitating. Sombre perspectives, the fears and weaknesses of the moment find us unresisting to their assaults, yielding without courage, our immoderate bemoanings astonishing those who had listened to our accents of bravado, and admired our impetuosity. Can we feel surprised that these conditions dispose us to but ill-support dangerous operations, and the rude shock of severe traumatism? The reparative forces exact the harmony and concurrence of all the vital energies, and can only operate favourably when vital power, surmounting all disturbances, remains impassable and entirely devoted to its labour. An exaggerated reaction, an ill-controlled moral perturbation, compromise everything and give rise to organic disturbances which add to the gravity of the case, enfeeble the strength, and yet demand new efforts. The patient too often succumbs during a labour thus opposed, the skill of the operator and the salubrity of the medium not being able to prevent calamities which take their origin in the very nature of the individual who becomes their victim.

This power of resistance in face of great operations is therefore no unexpected circumstance of the Anglo-Saxon temperament, but its logical consequence. Were Surgery less absorbed in the contemplation of anatomical facts, in local lesions, and in the study of manual procedures—all things, which in point of fact are well nigh identical amongst different people—and considered more closely the sentient being himself, the living and responding unity upon which it operates, it would have perceived these deep-seated differences which separate the human races, and would have drawn the inference that its rules of conduct should yield before such differences. There Surgery may with good right show itself active, bold, or even rash, while here it must remain prudent, timid, and conservative—it by no means always following that what can be done on the one side admits of repetition on the other.

REVIEWS.

Physiological Researches. By JOHN DAVY, M.D., F.R.S., London and Edinburgh, etc.; Inspector-General of Army Hospitals, H.P. Demy 8vo. Pp. 448. Price 15s. London: Williams and Norgate. 1863.

THIS work bears a close resemblance to the author's two well-known volumes, entitled, "Researches, Physiological and Anatomical," which preceded it in 1838. It is composed chiefly of papers which have appeared since that time in scientific journals and in the Transactions and Proceedings of different learned societies, but partly also of papers which the author has never before published.

Like the preceding volume, it is a plain statement of original observations and experiments on a great variety of points connected with the phenomena of animal life. Of these observations many are of a kindred nature, and by being made to bear upon the elucidation of some great question issue in more or less important conclusions. Others, again, are miscellaneous and fragmentary, leading to no obvious results, and so recorded with little or no comment. As individual acts of scientific research, these latter, in our opinion, rank scarcely less high than the former. In the student of physical science they betoken love of knowledge for its own sake, fairness to tell what may now and then be beyond his power to explain, pains to glean and thrift to store odds and ends of which he cannot perhaps at the time see the relation or import,—qualities these not showy, but still rarely if ever manifested except in combination with a high order of mind.

Of original and trustworthy observations such as those of Dr. Davy's, left as they are in most cases to speak for themselves, and not used to support theories, it is not easy to over-rate the worth. Practically they are the very fountain-heads of our physiological knowledge. Few of us have leisure, opportunity, or skill to make such researches for ourselves, and consequently we must take them on trust from those who have. It frequently happens, however, that they are not as readily accessible or as much appreciated as they should be. They are too apt to be buried in far back numbers of periodicals and Transactions, out of sight and out of mind. Such was the case with Dr. Davy's precious contributions to the science of Physiology, scattered as they were over the periodical literature of the last twenty-five years; and their present collection and republication in a well-printed, well-indexed, handy volume, is no less an act of justice to himself than it is a welcome boon to the physiological inquirer.

To the Medical Profession, among the best known of the author's researches, are those on Animal Heat. The present volume opens with a series of papers on this subject. Though published from fifteen to twenty years ago, they are still quoted by physiological writers as the standard authority on all questions connected with the temperature of man and animals. Two of these papers are especially worthy of the reader's notice. We draw attention to them because, while establishing conclusions which admit of important application in relation to health and disease, they furnish happy instances of the author's method of scientific research—the method, namely, of cautious induction from the broadest basis he could command of well observed facts. The first, "On the Temperature of Man," gives the results of exact observations made by the author upon himself, in England, daily for nine successive months, with the exception of one month's interruption. The points selected for illustration are, the variation of the bodily temperature during the twenty-four hours, and during the different seasons of the year; the effect thereon of active and passive exercise, and of exposure to cold air without exercise; the effect of excited and sustained attention; and, lastly, of taking food. The second paper, "On the Temperature of Man within the Tropics," records a nearly corresponding series of observations made during a residence of three years and a half in Barbadoes. A comparison of these two papers discloses several interesting facts, a few only of which we have space to notice. There appear to be three main points of difference between the bodily temperature in a tropical and in a cooler climate, such as that of England. (1.) In the tropics the average temperature of man is about one degree higher. (2.) It is likewise more uniformly diffused, there being comparatively little difference of temperature between the surface or extremities of the body and the internal parts. But though higher and more uniform, it is scarcely less liable to fluctuation than in cool climates. In the one climate just as in the other, these fluctuations are twofold, "one regular as the diurnal, connected with rest and refreshment from rest, the other casual or accidental, depending on varying circumstances of irregular occurrence, as exercise, mental emotion, exposure to heat, and the contrary." (3.) The order of the diurnal fluctuation, however, observed in the tropics, "is different from that in a cooler climate, the minimum degree of temperature being commonly early in the morning after the night's rest, and not at night previous to going to rest." This, Dr. Davy thinks, may be due partly to the depressing power of sleep, partly to the light bed-clothing there used and the free admission of the outer air into the bedrooms, partly also to normal reaction after the higher temperature observed at night. Be the cause what it may, the fact that the bodily temperature falls during sleep far more in hot than cool climates should, he says, "be suggestive of precautions in sleeping, especially as to too free exposure to the wind or currents of air, and very thin or no bed-clothing,—precautions commonly observed by the natives of hot climates, and too commonly neglected by strangers unaccustomed to tropical heats; and very often, I believe, with bad effect, especially when malaria is rife, and exposure to the night air is especially dangerous."—P. 38.

The voyage to and from Barbadoes in one of the West India steamers was an opportunity not lost to such an untiring worker as Dr. Davy. He seizes the occasion to make a series of most interesting observations on various points, such as the health of the crews in this line of packets, the effect of sea sickness on the health and temperature of the body, the effect of a sea voyage apart from sea-sickness, the effect of a high artificial temperature (such as the engineers and firemen of a steamer have to bear) on man, etc., etc.

"The Urinary Secretion of Certain Animals Considered in Connection with their Temperature, Food etc." is the title of a short but very suggestive paper to the Physiologist and Physician. Established facts, Dr. Davy maintains, point to the conclusion that the quality of the urine is determined mainly by *the intimate structure of the urinary organs*, and not (as generally supposed) by physiological conditions of diet, exercise, temperature, etc. At the same time he believes it to be "affected in a minor degree by circumstances of diet and atmospheric temperature, etc., especially in man. In a cold or cool climate, using a diet chiefly of animal food, lithic acid and lithate of ammonia are found commonly in a notable proportion in the human urine; but not so in a hot climate, not even when the diet is the same; and in consequence, within the tropics, where least oxygen is consumed in respiration, the ailments depending on the formation of gravel and calculi are almost unknown, and the same remark applies to gout."—P. 194.

Upon the publication, in 1858, of Dr. Richardson's well-known prize essay on the cause of the coagulation of the blood, Dr. Davy instituted a series of experiments "for the purpose of testing Dr. Richardson's speculations and of satisfying himself, if possible, on the subject." These experiments are recorded in a paper in the present volume entitled "Observations on the Coagulation of the Blood." In his prize essay, it will be remembered, Dr. Richardson laboured to prove that this coagulation is a purely chemical phenomenon, and due to the escape of a minute quantity of ammonia which holds the fibrin in solution. Without going into detail, we may as well state at once that the result of Dr. Davy's experiments, as made upon the blood of the common fowl, are wholly at variance with the ammonia theory. He could find no indications of the escape of ammonia during the coagulation of the blood, or of its presence in the blood, neither could he find that the addition of ammonia in a notable quantity prevented coagulation. His experiments, which are recorded with great minuteness of detail, appear to have been performed with every precaution against fallacy; and when we take them in connection with the more recent and positive results arrived at by Professor Lister, we cannot but think that the weight of evidence is strongly against Dr. Richardson's hypothesis. In the paper we are now considering, Dr. Davy's conclusions are purely negative, his object being to test the soundness or unsoundness of a certain theory, not to adduce any new theory of his own. Towards the end of the paper he admits that he cannot offer even any hints likely to aid the solution of the problem. But if the first step towards seeing truth is to clear away error, these researches of Dr. Davy did something more than leave the "coagulation question" where he found it.

The papers to which we have hitherto drawn attention form a comparatively small portion of this volume. Its bulk consists of contributions of a kind to be appreciated by the professed physiologist or naturalist rather than by the ordinary Medical reader. There is a long series of papers on Fishes, occupying about a hundred pages, and comprising observations and experiments on the Salmonidæ; on the ova of this tribe, their impregnation, vitality, and relation to the distribution of species; on the urinary excretion of fishes; on fish in relation to diet, etc., etc. The results of his experiments on the ova of salmon have done much to settle that important question as to the age at which the impregnated ova of fishes are most retentive of life, and consequently are in the state best fitted for transport without loss of life. There is again a large number of papers on subjects the most diverse, but all of more or less interest to the physiological inquirer.

After perusing this volume the reader cannot help thinking to himself, how the author in a life busied with the strict performance of the duties of his Profession ever found time to prosecute researches such as those here recorded. For it must be remembered that these researches lay outside that routine of toil which was his daily calling, and were taken up *ἐκ παρέργου*, not as the main pursuit of his life. His fifty years, or thereabouts, spent in the Army Medical Service were years devoted to the earnest study of disease, and have been scarcely less fruitful in contributions to Medical science than to general physiology. Witness his lately published book on "Army Diseases," a book unpretending in title and form, but not unworthy of a whole lifetime's observation. And yet, with all this practical work, he has found time to undertake purely scientific inquiries, which, in strictness of method, wideness of range, and fruitfulness of results, one can only liken to those of his great predecessor in the same field of labour, John Hunter. Though old Dr. Davy is, we believe, still hale and hearty in mind and body, we wish him yet many years of health and work. Science can ill spare such a devotee.

GELATINISED CHLOROFORM.—Chloroform, as well as ether, possesses the property of intimately mixing with albumen, first forming a liniment and then a light jelly, which is often of much more easy application than the volatile substance which gives rise to it. M. Grimault supplies a formula for its preparation independently of any pharmaceutical apparatus. It suffices to shake up in a phial two volumes of white of egg and one volume of chloroform. Providing that the chloroform be pure, or at least is devoid of foreign bodies (alcohol or acid for example) liable to coagulate the albumen, the jelly forms of itself, and can be preserved for several days without separation.—*Bull. de Thérap.*, vol. lxiii., p. 559.

GENERAL CORRESPONDENCE.

THE TREATMENT OF THE DROWNED.

LETTER FROM MR. JENNINGS.

[To the Editor of the Medical Times and Gazette.]

SIR,—The Committee of the National Life-Boat Institution having asked for information as to the treatment of the drowned, by means of a circular addressed to the various Journals and Medical Societies, I am induced to offer a few remarks upon this important subject, about which much difference of opinion still exists.

First, then, let me remind you of the old adage, that "one ounce of practice is worth a pound of theory," and clearly convinced as I am that I have succeeded in fully establishing respiration and circulation by means of galvanism, I for one am astonished that the Committee of the Royal Medical and Chirurgical Society have not recognised this agent in their Rules for the Treatment of the Drowned, as it is undeniable that galvanism, alternated with other stimulants—*i. e.*, the cold dash, warmth, and friction—will excite reflex action. Its value was demonstrated many years since by Mr. Erichsen. Its use is advocated by Mr. John Hepworth in the *British Medical Journal*, July 20, 1861. I must also enter my protest against the last clause of Rule 3, which states that the patient should not be left in the hot bath longer than five or six minutes. In the case reported by me in the *Medical and Surgical Provincial Journal*, April 22, 1853, it proved fatal in half of that period. Therefore, why use it at all, particularly when no directions are added as to the degree of temperature. Rather substitute a blanket wrung out of hot water, as suggested by Mr. John Hepworth in the letter above referred to, at the very time when I brought the subject before the annual meeting of the Association at Canterbury, together with the results of experiments on animals. The hot blanket would not be attended with danger in the hands of the people, or prevent the skin from exercising the necessary functions.

I am, &c. J. C. S. JENNINGS.

Abbey House, Malmesbury, October 26.

REPORTS OF SOCIETIES.

ABERNETHIAN SOCIETY, ST. BARTHOLOMEW'S HOSPITAL.

THURSDAY, OCTOBER 22.

Mr. VERNON, President, in the Chair.

Mr. ECCLES, House-Surgeon, read notes of a case of

RUPTURED DUODENUM,

which had been admitted on October 10, under Mr. Lawrence. The patient, a child twelve months old, had fallen from a first-floor window on to some railings, and then down the area. There was no bruise or other external sign of violence, except a readily reducible hernial protrusion in the right iliac region. The child took the breast after being brought to the Hospital, and died five hours after the accident. The post-mortem examination disclosed a complete severance of the second and third portions of the duodenum. The left kidney was much lacerated. The singularity of complete division occurring in the soft, flexible, and well-protected intestine, without injury to the integument, was commented upon. The most probable explanation appeared to be, that the spike on which the child fell pushed before it the ascending and movable part of the duodenum, thus tearing it from the fixed and vertical part.

Mr. HINGSTON read a very interesting case of

ATROPHY OF THE BRAIN,

parallel to which he had been able to find no recorded instance. The subject was a child two years and a-half old, a patient at the Children's Hospital. For eighteen months it had been growing thinner and thinner, its mental and bodily powers diminishing rather than increasing. Good food, careful nursing, and Medical aid alike failed in arresting the disease. Emaciation became extreme, slight occasional diarrhœa being the only other notable symptom. At last a sharp attack of this set in, with occasional convulsions, during one week, at the end of which she died. Three relatives of the child were said to have died with similar symptoms. *Autopsy Twenty Hours after Death.*—Organs healthy; skull of average size; fontanelles closed; sutures knit. Brain smaller than skull; convolutions well marked with deep sulci; membranes unaffected; ventricles large, and containing clear serosity; brain substance universally firm, and harder than usual, as if soaked in spirit. No tubercular or inflammatory deposits anywhere. Mr. Hingston believed the case to be an anomalous form of atrophy of the brain, resulting neither from pressure of the skull by premature closing of the sutures and fontanelles, nor from long-continued illness.

OBITUARY.

THE LATE DR. ALLAN WEBB.

We are sorry to have to record the death of this distinguished Surgeon of the Bengal Army, who expired at Clevedon, Somerset, on September 15, 1863. He had suffered for some time from obscure liver disease, following a fever which was contracted in consequence of the arduous nature of his duties in Calcutta, where he held the responsible posts of Presidency Surgeon, and Surgeon to the Native Hospital. He had passed the best part of thirty years in India, and had attained the most eminent rank amongst his Professional brethren, when his career, likely to become more useful to the public and the Profession than ever, was thus prematurely closed. For very many years he was the Medical attendant, as well as intimate personal friend, of the late Bishop (Daniel Wilson) of Calcutta, and accompanied him in his periodical visitations to various parts of his vast diocese. He was subsequently selected by Government for the post of Professor of Military Surgery, then of Surgical and Descriptive Anatomy; and on the completion of the splendid new College Hospital, Clinical Professor of Surgery at the Calcutta Medical College. Here he laboured with great energy for many years at the formation of a Museum of Morbid Anatomy, and this, together with the great experience he had gained from his private practice, and from the observation of the differing phases of Indian disease, as seen in various regions from Simla to Singapore, enabled him to bring forward original views regarding the pathology and practice in Indian diseases, which he embodied in combination with a large amount of details connected with morbid anatomy, etc., in the work with which his name has become principally identified, the *Pathologia Indica.*

In addition to a minute knowledge of anatomy as well as Medicine, he possessed the comparatively rare qualifications of an artist, excelling as a draughtsman and a modeller. In the department of Practical Surgery he was remarkable for the fertility of his resources, and was enabled to contribute much original and interesting matter to the Medical periodicals; more especially we may mention his papers in the *Indian Annals of Medical Science* on "Osseous Tumours," and on "Elephantiasis Orientalis." This latter subject he made his own; no European Surgeon has had more experience in this very common Bengal disease. He made minute researches, microscopical, etc., etc., into the nature of the scrotal tumours. His views were embodied in a paper which was read by him and discussed a few years ago at the Medical and Chirurgical Society of London. His great experience as an operating Surgeon bore fruits in the literature of the Profession, when he produced his little work, so valuable to the native student and the military Surgeon, the "Field Notes and Ready Rules for Operations." Whether we look upon him as a Physician, Surgeon, Medical Practitioner, or Christian gentleman, we have reason to deplore his loss at the comparatively early age of fifty-five years. Dr. Webb had an extensive practice among the residents of Calcutta; by the Europeans, the native gentry, and all the poorer classes, the news of his premature decease will be received with feelings of great regret. They will have lost not only a trusted Medical adviser but a true friend.

The Social Science Meeting at Edinburgh.—The financial report states that the revenue of the general fund from the sale of tickets was £1,747 14s., and the disbursements £208; leaving a balance of £1539. The local subscription fund amounted to £905, and the disbursements to £802, leaving a balance of £102.

MEDICAL NEWS.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, October 29, 1863:—

Matthew Leach, Wisbeach, Cambridgeshire; Frederick Hendebourck Gervis, St. Thomas's Hospital.

The following gentlemen also on the same day passed their First Examination:—

Frederick William Henderson, Guy's Hospital; Daniel Iles, St. Thomas's Hospital; Walter Hugo Reed, St. Thomas's Hospital; Frederick Le Feve Milburn, Charing-cross Hospital; James Wells, Bristol Medical School.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Blasson, Thomas, M.R.C.S. Eng., has been appointed Medical Officer to the House of Correction at Falkingham.

Horgan, William C., M.D. St. And., has been elected Coroner for the Borough of Drogheda.

Kerr, David, M.D. Aberd., has been appointed one of the Examiners in Medicine in the University of Aberdeen.

King, Charles C., M.D., Q.U.I., has been appointed Medical Inspector under the Poor-law Commission, Ireland.

Maling, Edwin Allan, M.R.C.S. Eng., has been re-elected Librarian to the Sunderland Medical Society.

Morgan, George Blacker, L.R.C.S.I., has been elected President of the Sunderland Medical Society for the ensuing year.

Rowe, Thomas Smith, M.D. Edin., has been elected Surgeon to the Royal Sea-Bathing Infirmary, Margate.

Smartt, Francis W., L.K.Q.C.P.I., has been appointed Medical Attendant to the Constabulary, Ballymahon, Co. Longford.

Smith, Aquilla, M.D. Dub., has been re-elected a Member of the General Council of Medical Education and Registration.

Stephenson, T. Appleby, M.R.C.S. Eng., etc., has been elected President of the Nottingham Medico-Chirurgical Society.

Taylor, William, M.R.C.S. Eng., has been elected Consulting Medical Officer to the Royal Sea-Bathing Infirmary, Scarborough.

Tucker, James, M.D. Glasg., has been appointed Medical Officer to the Sligo National Model School.

Tyndall, G. H., L.R.C.S.I., has been appointed Surgeon to the P. and O.S.N. Co.'s Steamer, *Ceylon.*

Yeld, Henry John, M.D. St. And., has been elected Secretary and Treasurer to the Sunderland Medical Society.

DEATHS.

Dighton, Christopher, M.R.C.S. Eng., at Northallerton, Yorkshire, on November 2, aged 74.

Drew, Edward P., M.D. Edin., of Cappoquin, Co. Waterford, on October 23, aged 56.

Price, James, M.R.C.S. Eng., at Hereford, on October 24, aged 80.

Warren, Henry, M.R.C.S. Eng., at 18, Park-road, Regent's-park, aged 44, late of Bryn Morda, Oswestry.

White, M., Staff-Surgeon, at Burn Bank, near Glasgow, on October 22, aged 72.

The Navy Medical Service in Japan.—In Vice-Admiral Kuper's despatch, dated *Euryalus*, Gulf of Yedo, August 22, the following paragraph occurs:—"25. Their Lordships will observe the testimony borne by Mr. Morgan, Surgeon, to the able assistance rendered him by Mr. Charles R. Godfrey, Acting Surgeon to the *Vulcan*, who at the time of the engagement was on board this ship waiting a passage to Shanghai." Mr. Morgan's letter referred to by the Vice-Admiral is as follows:—"*Euryalus*, at Kagosima, August 17. Sir,—I have the honour to transmit for the information of the Commander-in-Chief a detailed statement of the casualties in the squadron engaged with the Forts at Kagosima, on the afternoon of the 15th inst. I would beg to bring the notice of the Commander-in-Chief the able assistance rendered to me by Mr. Charles R. Godfrey, Acting Surgeon of Her Majesty's ship *Vulcan*, who was awaiting passage to that vessel, trusting the Commander-in-Chief will be pleased to bring the same before the favourable notice of the Lords Commissioners of the Admiralty. Mr. Edward A. Birch, Acting Assistant-Surgeon, I would beg also to mention, who was untiring in his attention to the wounded.—I have, etc., D. L. Morgan, Surgeon. Commander James E. Hunter, Commanding Officer of Her Majesty's ship *Euryalus.*"

Munificent Legacy.—A Birmingham paper states that the magnificent legacy of £10,000 has just been bequeathed to the General Hospital in that town by the late Mr. Daniel Darby, who died a few days ago at Rowley. By the law at present in operation respecting legacies half this sum will have to be invested; but the remaining half will clear the Hospital of its present debt, and the invested half will add some £200 to its regular income.

The Paris Faculty of Medicine.—The Winter Courses will re-open on November 17, and will be as follow:—*Medical Physics*—Professor Gavarret. *Histology*—Robin. *Medical Pathology*—Guillot. *Operations and Apparatus*—Malgaigne. *Medical Chemistry*—Würtz. *Anatomy*—Jarjavy. *General Pathology and Therapeutics*—Chauffard, as substitute for Andral—*Surgical Pathology*—Denonvilliers. *Clinical Medicine*—Bouilland, Piorry, Rostan, and Trousseau. *Clinical Surgery*—Jobert, Lavgier, Velpeau, and Nélaton. *Clinical Midwifery*—Dépaul. *Diseases of Children*—Roger. *Mental and Nervous Diseases*—Lasègue. *Ophthalmology*—Follin. Since this programme was issued, M. Follin, Professor of Ophthalmology, and M. Verneuil, Professor of Venereal Diseases, have sent in their resignations, not being satisfied with the provisions made for teaching their branches of study in the Faculty.

Remarkable Case of Partial Recovery from a Punctured Wound of the Heart.—Dr. Lankester has just concluded an inquiry at the Middlesex Hospital relative to the death of Francis William Fisher, 14 years of age, who died from the effect of a wound in the heart, accidentally inflicted with a penknife by another boy. The occurrence took place three months ago, and deceased was discharged from the Hospital as cured, but on Friday week he was taken ill and died in a few hours. Dr. O'Flaherty made the *post-mortem* examination, and on the left breast saw a cicatrix which he traced to the heart, the right ventricle having been penetrated in a slanting direction. Had it been straight death would have been instantaneous. The cause of death was apoplexy, produced, he believed, by the weakening of the heart's action from the thinning of its walls, the effect of the wound.

Discovery of Mammoth Remains.—A tusk of *elephas primigenius* has been discovered by some workmen employed in constructing a sewer at Leicester. The discovery is of interest from the position occupied by the tusk. Eleven feet of gravel were found above it, and this gravel was very angular, showing it to belong to the glacial drift; below was a thin stratum of white Keuper sandstone, then three feet of Keuper, then sixteen feet of the white sandstone, and below this another stratum of marl, containing nodules of gypsum. The tusk itself was of the usual curvilinear shape, was about nine feet in length, and two feet in circumference, and consequently larger than the specimen in the British Museum. Some difficulty was experienced in getting it out, from its very friable condition. Portions of both ends were lost, but about six feet is now safe in the Leicester Museum. Teeth of the mammoth have been found in the gravel in the same neighbourhood.

The Short Water Supply.—The number of complaints in the daily papers on the subject of the non-supply of water on Sundays is an evidence that the evil, although chiefly felt by, does not solely affect the poor. Mr. Alfred Smee's letter, recommending the utilisation of the Grays water, called forth some doubts as to whether 10,000,000 of gallons of water could be daily obtained from Grays. It seems, however, that one-half the quantity was daily pumped into the Thames from one small excavation there. This water, unlike the deep springs of London, contains no salt nor soda. Mr. Richard Meeson gives the following account of the source of the Grays water:—"The springs are developed at the bottom of a chalk pit of about seventy acres area, and the water prevents any deeper excavation of the chalk. Large fissures occur across the bottom of the pit, some of which are two feet wide, and their direction is from N.W. to S.E. The smaller fissures are innumerable. Where is the watershed that supplies these springs, as well as the great overflow into the Thames along its north shore in this neighbourhood? The chalk at Grays is some 150 or 200 feet lower than that at the northern part of the county, and in Hertfordshire, Cambridgeshire, Suffolk, and Norfolk, and is in communication with the chalk in those counties, though a valley filled with London clay overlying the chalk intervenes. If by the fissures a water communication is also kept up between the high and extensive chalk country to the north-west and north, and the lower chalk at Grays, it will account for the enormous quantity of water there, and solve the question of what becomes of the rainfall of those higher districts, the surface rivers of which are acknowledged to be unequal to the discharge of the rainfall thereupon, and which must be got rid of by underground rivers discharging themselves somewhere."

The Alleged Bad Drainage at Bethnal-green.—At the adjourned inquiry respecting the death of Amelia Julietta Ware, who, it was alleged, had died from neglected scarlet fever, arising from the bad drainage of the house where the parents resided, at No. 8, George-street, Green-street. Mr. John Gay, the Senior Medical officer of the Great Northern Hospital, gave evidence that he had made a post-mortem examination of the body of the deceased, which was very much wasted and emaciated, it seemed, from insufficient nutrition. He had ascertained that the deceased and the other children had suffered from sore throat, pains in the limbs, and sickness. The family occupied three rooms in a newly-constructed, well-built house. The amount of space in each room and the drainage of the house were very satisfactory. There was plenty of water, and the drains were trapped. The parents had informed him that the offensive smell came from beneath the boards of the back room on the ground floor, which caused the father to remove to one of the upper rooms. He fully believed that the smells complained of did not arise from the other chambers in the house The drains had been opened; he had examined them, and had found them quite perfect and free from any effluvia. He could not therefore trace the death to any local cause. He was of opinion that the deceased had died from scarlet fever, and that the health of the deceased had been deteriorated by the want of cleanliness and the filthy habits of the parents. The jury returned a verdict to the effect "that the deceased died from scarlet fever brought on by the want of care and neglect of the parents, and not from bad drainage as alleged." The inquiry then terminated.

Deaths and the State of the Public Health.—The total number of deaths in the last quarter was 112,384, against 101,232 and 92,225 respectively in the two previous summer quarters. In the same period of 1860 the number was only 86,312, and if last summer had been as healthy, it may be stated in round numbers that at least 23,000 persons would have been living when autumn came whose names were enrolled in the registers. A short list of districts, parishes, townships, or other places which have been specially noted by the registrars as localities where scarlatina has sensibly increased the mortality will suffice to show how universally that disease has been diffused over the country. Besides many other parts, it prevailed in Godstone, Maidstone, Deal, Walmer, Havant (where it caused 20 deaths out of 48), Cowes, Ryde, Basingstoke, Uxbridge, Brentford, Ware, Standon, Northampton, Weldon, Peterborough, Toddington (where, out of 40 deaths, about 30 were from scarlatina), Leighton Buzzard, Stratford in Essex, Grays, Great Burstead, Great Waltham, Colchester, Kelvedon, Coggeshall, Hedingham, Wickhambrook, Sudbury, Lavenham, Hadleigh, Stanton, Poole, Bere Regis, Newton Abbot (half of the 78 deaths there were from scarlatina), Dartmouth, Plymouth, Looe, Mevagissey (where the deaths were 49 out of 81), Truro, Falmouth, Helston, Penzance, Stogursey, Bishop's Lydeard, Stowey, Keynsham, Bedminster, Bristol, Clifton, Gloucester, Cainham, Bridgnorth, Gresley, Tamworth, Sedgley, Worcester, Hinckley, Barrow-upon Soar, Leicester, Uppingham, Bourn, Pinchbeck, Boston, Birkenhead (49 deaths out of 102 in Wallasey, a sub-district of Birkenhead, were from scarlatina), Warrington (where there were 143 out of 319), Pilkington, Chorlton-upon-Medlock, Hulme (where "the Black Brook" contaminates the air and spreads scarlatina and diarrhœa on its banks), Salford, Manchester, Preston, Huddersfield, Hunslet, Leeds, Ecclesall, Bierlow, Sheffield, Doncaster, York, Sculcoates, Hull, Eston, Normanby, Durham, Sunderland, Carlisle, Abergavenny, Bedwelty, and Newport.—*Registrar-General's Quarterly Report.*

Aqueous Extract of the Liver of the Cod.—M. Despinoy, of Lille, examining the fluid which escaped during the fermentation of the cod-liver in the preparation of the oil, found it richer in the properties found in the oil than the oil itself. He prepared an extract from the fluid in order that it might be administered in the form of pills. M. Devergie recently reported to the Academy on the results obtained by several trials of these made in the Paris Hospitals. It was found that when the pills were given in great doses they caused anorexia, but given to young scrofulous subjects in moderate and prolonged doses, they improved the assimilatory powers very much, as is done by small doses of cod-liver oil; but in regard to their ultimate effect upon the special symptom they were found very inferior in efficacy to the oil. Still, as a remedy in cases in which the cod-liver oil cannot be borne in examples of chlorosis, anæmia, indigestion, and commencing phthisis, they may prove of great utility, it always being remembered that the same amount of therapeutical results is not to be obtained as from the oil. The mean dose of the pills is four per diem, commencing with one night and morning. M. Despinoy's researches prove that the peculiar active principle of cod-liver oil has yet to be sought for, as, while the watery extract is of less therapeutical power, it is richer in its proportions of propylamine, ichthyoglycene, iodine, phosphorus, etc.—*Bull. de Thérap.*, vol. lxiii., p. 545.

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

Eta.—We think that he has no legal right to the title.

Dr. Kidd.—If Dr. Kidd will send full particulars of the four cases of apnœa treated by Faradisation they shall be published.

We have received a copy of the Report of the Census Commissioners on the Status of Disease in Ireland in 1861.

Raphides.—The importance of these beautiful objects turns out to be such that descriptions of certain orders of plants can never henceforth be complete, in any system pretending to be a natural one, without a special account of the fact which implies that a fundamental end of the plant life, in certain cases, is the production of raphides. Thus, no other single diagnostic for the plants in question is so truly natural, simple, and universal as this; and our country readers may find both amusement and instruction in the evidence now at their command in every hedge-row. The bright berry of *Arum maculatum* is pregnant with raphides, enclosed in large cells, and naked raphides of remarkable size are afforded by the equally scarlet berry of *Tamus communis;* examples of the raphis-bearing orders Araceæ and Dioscoriaceæ, as depicted by Mr. Gulliver in the "Annals of Natural History" for the present month. In the same paper is also a representation of raphides in the ovule and berry of Onagraceæ, a curious addition to his discovery of this character in the seed leaves. Such inquiries are likely to be useful in relation to the adaptation of special manures to particular plants, and as affording a step in the right direction of plant-biography.

The Origin of the Mhow Scandal.—A writer in the *Cornhill Magazine* gives the following version of the origin of the misunderstanding between Col. Crawley and Dr. Turnbull, and Paymaster Smales:—When the 6th Dragoons proceeded to India in that year, several changes occurred among its officers, and about a year before Colonel Crawley took command of it a captain and his wife exchanged into the regiment from the —— Light Dragoons, and were cordially received into its society. But shortly afterwards it came to be known that the lady was a *divorcée*, and that her former marriage had been dissolved, according to Lord Campbell, by whom the operation had been performed, "under circumstances of peculiar profligacy." This painful disclosure created, as may be supposed, considerable scandal among the small European society of the station; and all the married officers of the Inniskillings, with the exception of Colonel Crawley, declined to concede any longer to the lady the local rank which she had hitherto enjoyed among their wives and daughters as an honest woman. Colonel Crawley, it would seem, espoused the divorced lady's cause with considerable warmth, urging upon his married officers that they ought to allow "bygones to be bygones;" and endeavouring to enforce the liberal doctrine that as long as a male or female Inniskillinger conducted himself or herself with propriety after joining the regiment, no member of the corps was entitled to inquire into any peccadillos of which the party might have been previously guilty elsewhere. He even went so far as to express to his officers his opinion that if a certain official tin box, containing old regimental papers, which Colonel Crawley, with delicate irony, called "Colonel Shute's legacy," was examined, there were very few of them whose characters would stand the scrutiny. And, finally, Colonel Crawley issued a formal memorandum, in which he peremptorily ordered "that the harmony and good feeling which should always exist between officers of the same corps, should not be jeopardised by any further allusion to this moral and social difficulty by any officer under his command," (p. 53). The two individuals who seem to have resisted most firmly Colonel Crawley's liberality on the subject of the Seventh Commandment were, as might have been expected, the two senior married officers of his regiment, Surgeon Turnbull and Paymaster Smales. From the date of the memorandum which has just been quoted all friendly intimacy between these two gentlemen and their commanding officer ceased; constant squabbles between the parties are indicated throughout the evidence recorded in the Blue Book; and very grave complaints against Messrs. Smales and Turnbull, on apparently very trivial grounds, appear to have been forwarded from time to time to the superior authorities with varying results.—*Cornhill Magazine for November.*

Curiosus may be gratified with the beginning, middle, and end of the autobiography of Mr. Beaney, of which we showed the consequences in our last. It begins thus:—

"*The Medical Celebrities of Victoria.*

No. I.

"MEMOIR OF JAMES G. BEANEY, ESQ., F.R.C.S.,

"Surgeon to the Melbourne Hospital.

"This eminent Surgical Practitioner was born at Canterbury, in Kent, on February 15, 1830, and received his early education in that city. At an early age he evinced an ardent desire to study the Medical Profession, and was therefore in due course articled to William James Cooper, Esq., Surgeon, of Canterbury, a gentleman of high character and great Professional attainments, and brother to the eminent cattle painter of the same name. Through intense application to study, Mr. Beaney's health gave way, and having determined upon taking a sea voyage for its recovery, he sailed for Port Phillip in July, 1852, arriving in October of the same year. He resided for a short time with the Hon. Jno. Hood, M.L.C., but finding that his health was becoming more critical, he resolved to return to England, and on April 5, 1853, he quitted the shores of Australia for the mother country.

"Sailing from Liverpool in November, 1856, he arrived in Melbourne by the *Shooting Star* in February, 1837, and at once commenced the private practice of his Profession. Early in 1858 the public sustained a great loss by the death of Dr. John Maund, one of the leading members of the Medical Profession in Victoria and a most talented Practitioner. By this sad event the Medical society was deprived of its greatest ornament and the public at large of one of its most useful and accomplished members. It was the wish of this lamented gentleman that Mr. Beaney should represent him during his illness, and finally to succeed him in his practice in the event of his death. The last wish was conveyed to Mr. Beaney in the following terms on the evening of his dissolution, 'Beaney, I am going, and I wish you to be my successor, for I know no man better qualified than yourself to take up my practice where I have left it;" and Dr. Maund's brother, in a letter written to a gentleman in Melbourne, says, "Dr. Beaney is a most worthy successor to my late dear brother." Mr. Beaney soon became a favourite with the public, and he soon found himself in possession of a lucrative and extensive practice, the truth of which may be gathered from the fact that many of his patients are from the neighbouring colonies."

Here follows an account of his introduction to Melbourne. Lastly, the climax of impudence.

"Mr. Beaney's manner in the sick room is kind and conciliating. Possessing an acute perception of disease, his diagnosis is rapid and reliable, and his treatment prompt and decisive, and uniting to a sound Professional education great powers of application and self-reliance, he has attained a position rarely accorded to so young a man; and, although it is so enviable a one, yet, in taking our leave of Mr. Beaney, we cannot help exclaiming, '*Palmam qui meruit ferat.*'"

What profession, we ask, could keep its respectability if such things were tolerated?

The Bones of Robespierre.—A discovery of some historical importance has just been made in Paris. The bones of Robespierre, St. Just, and Lebas were found by some masons who were laying the foundation of a house at the corner of the Rue de Rocher, in the Batignolles. It was there the remains of these men, who performed so remarkable a part in the first Revolution, were deposited, the churchyard of the Madeleine being too full at the time of their execution to receive any more corpses. Public balls were held for many years at the place where the skeletons were discovered.—*Paris Correspondent of the Times, October 31.*

FREEMAN'S CHLORODYNE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I am instructed to inform you that Freeman's chlorodyne is not used at this Hospital.

I am, &c.

JOHN D. HILL, Resident Medical Officer.

Royal Free Hospital, November 4.

VILLAGE HOSPITALS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Being desirous of establishing a village Hospital in this place, I shall feel much obliged if any of your readers will furnish me with information or statistics on the subject. I have already received from Mr. Napper, the Surgeon to the Cranley Village Hospital, a report of that institution, but should be glad to learn more about any similar one, to lay before those of our town interested in the subject.

I am, &c. A COUNTRY SURGEON.

SANITARY MEASURES IN THE COLONIES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As you have inserted a letter from Dr. Franklyn on the death statistics in our colonies, I should feel obliged if he, or one of your readers, would state what sanitary measures have been employed in Trinidad, Barbadoes, and Jamaica; as also what treatment has been adopted there of late years in the diseases peculiar to that climate. The situation of the barracks at Barbadoes and Trinidad is quite distinct; the former being placed near to the sea-shore, on a limestone rock, with scarcely a blade of grass on the bare soil, while the latter is situated on low and alluvial ground, close to a large swamp. At Barbadoes, also, the barracks being on the windward side of the island, they are exposed to the constant trade wind, but at Trinidad the barracks are on the leeward side of the island, and surrounded by hills, yet yellow fever has prevailed in both situations with nearly equal intensity, in spite of the adoption of every precautionary measure that could be thought of. I should therefore infer that the difference in the rate of mortality of late years is to be referred to the difference of treatment.

I am, &c.

London, November, 1863. AN INQUIRER.

SANITARY CONDITION OF SALISBURY AND PLYMOUTH.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In the *Medical Times and Gazette*, issued on Saturday, the 31st ult., it is stated that in Salisbury, during the quarter just ended, the deaths out of a population of over 9000 have been only 20, giving a death-rate of

2 per mille, or of 9½ on the year, a circumstance so very remarkable that I would respectfully ask for the authority, or for the name of some official person in Salisbury to whom application may be made for information respecting the nature and cost of the sanitary works lately accomplished in that city.

Here, I regret to say, the Local Board of Health has no such flattering tale to tell, for, after spending nearly £17,000 in about nine years, the rate of mortality during the quarter ending August 31, 1863, was 6·75 per mille, and the centesimal proportion of zymotic deaths to deaths from all causes was 36, and that the rate of mortality during the year ending August 31, 1863, was 23 98 per mille, and the centesimal proportion of zymotics 27·34.

Your Salisbury correspondent would oblige by saying what number of the 20 deaths were of a zymotic character.

I am, &c.

Plymouth, November 4. J. C. Cookworthy, M.D.

[*** The statement published of the death-rate of the last quarter at Salisbury is given on the authority of the Registrar-General's Report.]

Dr. Edmunds and the Council of the Hunterian Society.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I did not see the number of the *Medical Times and Gazette* for October 24 until some days had passed after its publication, hence my tardiness in noticing Dr. Edmunds's letter. As it is no part of my duty to defend the conduct of the Council of the Hunterian Society, I shall address myself only to those statements in the letter which immediately concern myself, and which, from the manner of their relation, seem to be liable to misconstruction.

Dr. Edmunds states that I "had just previously entered his study in the garb of friendship, and, under pretence of talking over the affair out of which this question arose, had perused his private correspondence in connection with it." "This fact," he considers, elucidates my "reluctance to take credit for bringing him to justice." It is quite true that, more than two months before the first sessional meeting of the Council, I had some conversation with Dr. Edmunds, and that I read some letters which had reference to a business transaction between himself and a Professional friend, concerning which he was anxious to have my opinion. But it is equally true that I did this most reluctantly, and at his own urgent request; and that I never used any information thus obtained to frame, modify, or support any charge against him before the Council of the Hunterian Society.

He also states that he "wrote repeatedly" to me, but that he "met with nothing but evasion."

It is true that Dr. Edmunds wrote to me on two occasions, requesting me to acknowledge or repudiate the authorship of a report which had reached him. As I was not disposed to recognise his right to interrogate me in this manner, I declined to answer his question until he had furnished me with the name of his informant, in order that I might call this person, whoever he might be, to account, for attributing to me an offence of which I was innocent. As Dr. Edmunds refused to do this, I refused to answer his question. This constitutes the "evasion" to which he adverts.

I may state, for the information of your readers, that the substance of the report alluded to in these two letters did not constitute, nor did it materially affect, the matter in dispute between the Council and Dr. Edmunds; and further, that I did not originate or circulate the report in question. To ordinary minds there is an apperent inconsistency between the avowal that he has "never been able to learn the charge which was brought against" him, and the statement, that he and I had talked "over the affair out of which this question arose." What question?

I congratulate Dr. Edmunds on his acknowledgment that possibly his "own conduct" may "be thought to require some apology," and venture to hope that further reflection may strengthen this conviction. As I have neither time nor inclination to prolong this correspondence, I shall not answer any other letters which Dr. Edmunds may address to you in reference to his dispute with the Council of the Hunterian Society.

I am, &c.

30, Church-street, Spitalfields, November 2. John Jackson.

COMMUNICATIONS have been received from—

Dr. T. Skinner; Mr. W. Eddowes; Mr. F. W. Richards; Abernethian Society; Mr. Joseph Littlewood; Apothecaries' Hall; Mr. W. Parker; Dr. C. Kidd; Ethnological Society; The Royal Institution of Great Britain; An Inquirer; Dr. E. F. Fussell; Mr. C. Carter Blake; Anthropological Society; Zeta; A Country Surgeon; Mr. W. Dunnett Spanton; Royal Medical and Chirurgical Society; Mr. John D. Hill; Dr. J. N. Vinen; Dr. J. C. Cookworthy; Deputy Inspector-General.

BOOKS RECEIVED.

On Glycerine, and its Uses in Medicine, Surgery, and Pharmacy. Being principally an Abstract of M. Demarquay's Treatise, "De la Glycerine," etc. By W. Abbotts Smith, M.D. London: H. K. Lewis. 1863.

*** An useful eighteenpennyworth. It will enable the Practitioner, at one tea-time, to read almost all that is known of the history, origin, production, purity, and uses of that very remarkable substance, glycerine.

A Practical Guide to Training, Gymnastics, and Riding. By a Subaltern. London: Longman and Co. 1863.

*** A book written in a capital tone, of which we willingly endorse almost every word. The work is short, practical, and without affectation, and contains in very short space what every elder boy at a public school, every student at college, and every youth who pursues commerce ought to know and do for his bodily health and activity.

The Treatment of Hoarseness and Loss of Voice. By Morell Mackenzie, M.D. London: T. Richards. 1863.

*** A reprint of a good paper read at the late meeting of the British Medical Association.

A Review of the Treatment of Tropical Diseases. By Joseph Ewart, M.D. Calcutta: Lepage and Co. 1861.

Ditto, Part II. Tropical Dysentery. 1863.

*** These two works on an important subject shall receive notice shortly.

The First Principles of Natural Philosophy. By W. Thynne Lynn, B.A. London, A.K.C., F.R.A.S., of the Royal Observatory, Greenwich. London: Van Voorst. 1863.

New Views on Irritative Congestion of the Windpipe. By C. B. Garrett, M.D. London: John Churchill and Sons. 1863.

Essays on Digestion. Written in 1834 by the late James Carson, M.D., F.R.S. Liverpool: Webb and Hunt. 1863.

On the Treatment of Syphilis and other Diseases without Mercury. By C. A. Drysdale, M.D. London: H. Baillière. 1863.

Report of the Health of Manchester and Salford. Manchester. 1863.

The Census of Ireland for 1861, Part 3, Vital Statistics, Vol. I. Report and Tables relating to the Status of Disease. Dublin: A. Thom. 1863.

Shanghai Hygiene, or Hints for the Preservation of Health in China. By James Henderson, M.D. Shanghai. 1863.

The Englishwoman's Journal. November, 1863. London: Jarrold and Sons.

A Practical Treatise on Rupture. By T. P. Salt. With Description of his Patent Orthonemic Truss for Inguinal Hernia and Elastic Supporting Belt for Umbilical Hernia. Birmingham: Cornish, Brothers. 1863. Pamphlet. Price 1s.

Essays on Digestion Written in 1834. By the late James Carson, M.D., F.R.S. Liverpool: Webb and Hunt. 1863.

Not like Man Bimanous and Biped, nor yet Quadrumanous, but Cheiropodous. By G. B. Halford, M.D. Melbourne. 1863.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 31, 1863.

BIRTHS.

Births of Boys, 962; Girls, 873; Total, 1835.
Average of 10 corresponding weeks, 1853-62, 1711·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	659	593	1252
Average of the ten years 1853–62	565·5	547·3	1112 8
Average corrected to increased population..	..	..	1224
Deaths of people above 90	..	1	1

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhoea.
West	463,388	4	1	6	..	5	6	1
North ..	618,210	8	4	20	3	2	9	5
Central ..	378,058	3	5	19	..	5		..
East	571,158	2	1	39	2	1	21	6
South ..	773,175	2	5	36	..	10	19	7
Total.. ..	2,803,989	19	16	120	5	23	[illegible]	19

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·521 in.
Mean temperature	45·7°
Highest point of thermometer	56·2
Lowest point of thermometer	34·7
Mean dew-point temperature	42·2
General direction of wind	S.W.
Whole amount of rain in the week	0·47 in.

APPOINTMENTS FOR THE WEEK.

November 7. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

9. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

Medical Society of London, 8½ p.m. Mr. Wm. Adams, "On the Treatment of Disease of the Spine and Angular Curvature."

10. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

Ethnological Society, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Rowand, "On Treatment of Frost-bite by Friction with Snow and Incisions." Mr. Holmes Coote, "Cancerous Infiltration of the Penis." Mr. A. Durham, "Mucous Cyst of the Epiglottis treated by Incision."

11. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m.

12. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopaedic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

13. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

No. 12, Ward's Patent Albert

Lounging Chair, the most simple and luxurious extant, is fitted for the Drawing Room, Boudoir, Cabin, or Camp; is made in Wood, Iron, or Brass, and folds into a small compass for shipment. From 4½ Guineas.

No. 17, a Four-wheel Victoria Pleasure-ground Chair, mounted in a very light Iron-framed Carriage, upon C and patent India-rubber Springs, is either drawn by Hand or Animal, and is the most elegant and easiest Chair made.

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No. 19, a Bath Chair, with Leather Head, and Folding German Shutter.

No. 18, a Sofa Britska Spinal Carriage, with the inside Tray made to take out and in, on which an Invalid may be taken from her room to the carriage.

No. 8, Ward's Improved Operating Dentist Chair, suitable for a Child or Adult.

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General Invalid Couch or Bed, made with or without a Convenience; it adjusts the back seat and legs to any given position by means of machinery, and is recommended by the Faculty as being the most complete Bed ever made for confirmed Invalids, or for Fractured Limbs.

No. 11 is Ward's Patent Reclining Chair, with Shifting Elbows for more easily getting on and off the Chair when the leg-rest is drawn out, as shown in the drawing.

No. 7 is an elegant Patent Recumbent Chair

Nos. 13, 13, is a Couch-Chair or Bed invented by Dr. Hester, and may be placed in any position by the Invalid without the assistance of a second person.

Nos. 2, 3, and 4, are all Self-Propelling Chairs, upon the best and most scientific principles; either may be used by a child eight years of age with perfect ease.

No. 24, Ward's Improved Child's Perambulator, with Patent Parasol. A variety always on hand.

No. 14 is the simplest and best-constructed Chair **for carrying Invalids up and down stairs, the lower handles for level ground, the upper ones for ascending or descending a staircase**: the sketch conveys the exact idea: it is also made portable for travelling. **Several other kinds are always in stock, upon various principles.**

N.B.—The largest Assortment **in the World of Invalid Chairs, Carriages, Crutches, and Beds always on hand, for Sale or Hire. Established more than a Century.**

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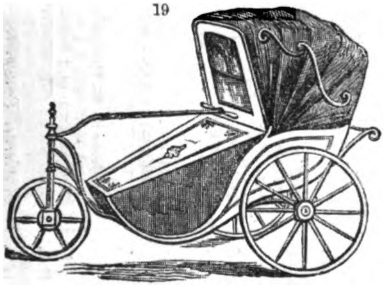

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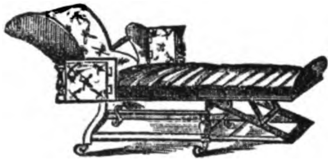

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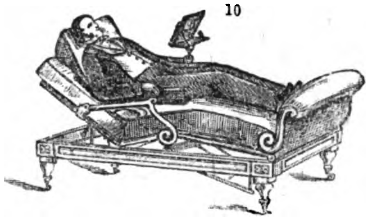

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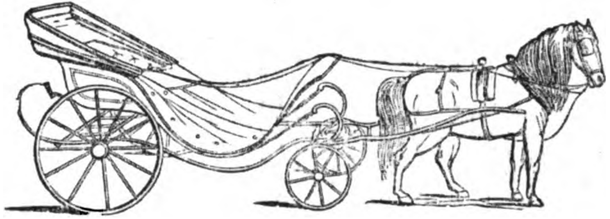

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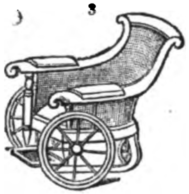

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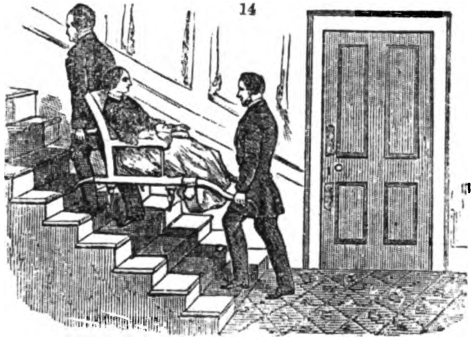

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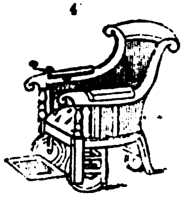

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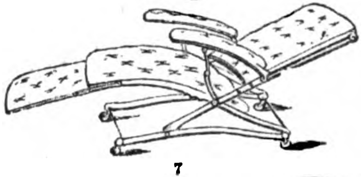

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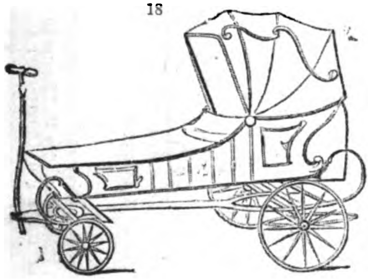

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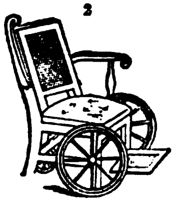

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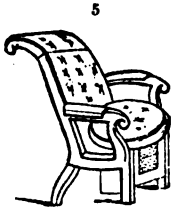

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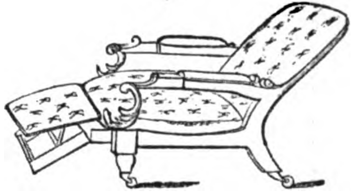

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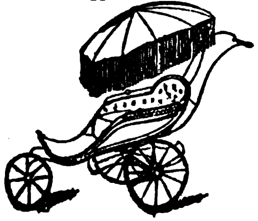

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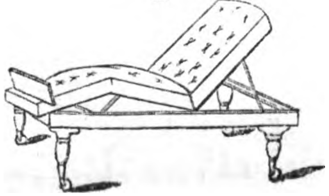

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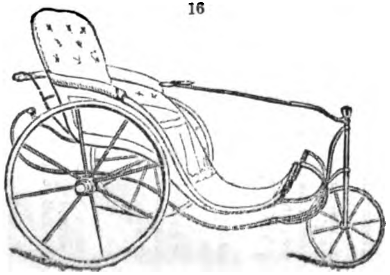

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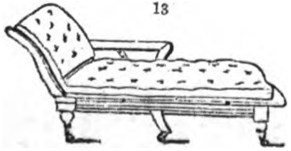

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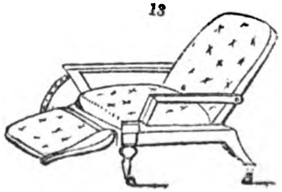

ORIGINAL LECTURES.

LECTURES
ON
THE BLOOD, LYMPH, AND CHYLE OF VERTEBRATA,

DELIVERED AT
The Royal College of Surgeons of England,
DURING THE SESSION OF 1863.

By GEORGE GULLIVER, F.R.S.,
Professor of Comparative Anatomy and Physiology to that College, and late Surgeon in the Royal Regiment of Horse Guards.

LECTURE IV.—*Liquor Lymphæ—Lymph-corpuscles and Cells—Formation of Lymph-corpuscles—Molecular Doctrine—Thymus-juice—Development of Red Corpuscles—Use and Relations of the Corpuscles of Lymph and Thymus-juice—Virchow and Hewson.*

Liquor Lymphæ.—Though the term lymph would imply merely a clear liquid, and was so used originally in ignorance of its morphological contents, as we must distinguish it from them, we may call it Liquor Lymphæ. It is limpid, and nearly or quite colourless; sometimes it coagulates very quickly, sometimes slowly; but often not at all in or when taken from the peripheral lymphatics. Its fibrin, when it contains any, as it regularly does in the thoracic duct, has been described as an immature or imperfect sort of fibrin, chiefly characterised by its tardiness of coagulation, and hence called bradyfibrin, or fibriogenous substance. But, when let out, it often coagulates more quickly than that of blood; and in the next Lecture we shall plainly show that the distinction between this so-called fibriogenous matter and fibrin is not always supported by a sufficient difference.

Lymph-corpuscles and Pale Cells.—The regular lymph-corpuscle is a nucleus. It may acquire a coating, which gradually assumes the form of a cell-wall, within which the nucleus remains. Thus the whole becomes the pale cell of the blood, which occurs also in this perfect state in lymph, especially in that of the thoracic duct. What a very different thing this pale cell is from a nucleus, which the common lymph-corpuscle really is, the diagram represents. We see sometimes in the blood, and more often in the lymph, every stage of growth from the time when this nucleus acquires a slight investment until it becomes the perfect pale cell. But the nucleus—this lymph-corpuscle—does not preserve itself without change; for though it exists and appears as a somewhat flattened or lenticular body within the cell, as may be well seen by the agency of water, or, still better, by very dilute acetic acid, a compound structure is unfolded under the action of strong acetic acid. Then a structureless part of the nucleus disappears, and a cleavage or division of the insoluble part so occurs as to present a double, triple, or even quadruple form. And so, as no such division can be produced thús on the free nucleus—the common lymph corpuscle—we are justified in concluding that this does not preserve itself unchanged within the ripe pale cell. What is the precise significance of this division cannot be inferred from any existing knowledge; for, though a sort of fissility or division has been observed and recorded as the process by which red corpuscles are increased in the early embryo, the phenomenon has never been verified as occurring regularly either in the pale or coloured cells of the blood of the breathing animal. And now we hope that the difference between the lymph-corpuscle and the pale cell of the blood and lymph has been so clearly shown that they are not likely to be confounded in future,—a confusion too common lately. The development of these into the red corpuscles of the blood will be described presently. Of the distribution of the lymph-corpuscles in the different parts of the lymphatic system an account was given in the last Lecture.

FIG. 18.

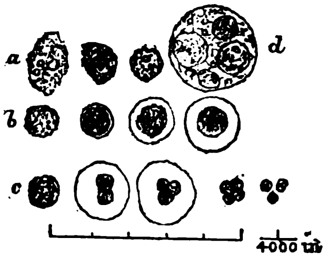

FIG. 18.—*a*, Formation of lymph-corpuscle,—first a shapeless aggregation of molecules in a very finely-granular base, next acquiring shape, which is completed in the third object. At *d* is an endogenous brood of lymph-corpuscles. *b*, The perfect lymph-corpuscle acquiring a cell-wall, nearly adhering at first, and distended and made clearer in the last object by dilute acetic acid. *c*, First the perfect lymph-corpuscle, scarcely affected, after having been soaked in strong acetic acid: then pale cells, from the lymph of the thoracic duct, showing the double, triple, and quadruple division of the nucleus under the action of the same acid.

Formation of Lymph-corpuscles.—But what is the origin of these nuclei—these common lymph-corpuscles? They would appear to be formed by a process of molecular coalescence (Fig. 18, *a*). The molecules become aggregated in a structureless or minutely-granular matrix, so as to resemble the germinal matter of Dr. Beale, or the histogenetic matter of Dr. Hughes Bennett; but the whole soon assumes the form and other characters of a nucleus, and thus becomes the common lymph-corpuscle, the development of which into a pale cell we have just followed step by step. Lymph corpuscles, however, may appear inclosed within a cell,—that is to say, a cell may contain an endogenous brood of them (Fig. 18, *d*). Still, this fact does not affect that of their formation by a growing together of molecules.

Molecular Doctrine.—Only of late years has this molecular doctrine of organisation been propounded from exact observations, either in opposition to the universality of the cell-theory, or as an adjunct to, or extension of, its groundwork. Now, we have traced the molecules as the very founders of these lymph-nuclei, which we have seen to be the basis of such important developments; and of the general truth of the molecular doctrine, and of the necessity of reconciling it with the unquestionable facts of the cell-theory, I have been insisting for years, because it was and is always so plain (as more particularly referred to in the Hunterian Oration of February last) that wherever nutrition, development, or growth, healthy or morbid, is most busily going on, there will these molecules most abound. When the molecular base of the chyle, formed of primary molecules, was thus displayed,—when the secondary molecules were shown to increase so rapidly in certain diseased growths, and in such quick, healthy developments as the periodic one of the seminal matter in adult animals, or of young growing parts in the fœtus—it used to be replied, "All that is only fatty matter, nothing but fatty granules." But the discovery of Acherson, that an oily granule would, when immersed in serum, even out of the body, acquire an albuminous pellicle,—the so-called Haptogen membrane—gave an interest to this subject; and now that the importance and significance of these molecules are becoming recognised, valuable results may be expected from researches in this direction, and some most useful and even comprehensive truth has already been realised in connection with the earliest processes of organisation, which should be studied with the help of the observations of Addison, Bennett, and Beale.

Thymus-juice.—And now, having seen the constitution of the fluid of the lymphatic vessels and glands, let us take a comparative view of the juice of the thymus. In the lecture on the chyle we shall show that in the mesenteric glands, as elsewhere, it is a white fluid; and that though the chyle of these glands is richer in nuclei than that obtained from any other part of the lacteal system, it does not owe its whiteness to these corpuscles, but to the characteristic molecular base. But the juice of the thymus in young and healthy animals is well known to possess a creamy consistency and opacity, and these qualities are indeed owing to the great abundance of corpuscles or free nuclei, identical in shape, size, and chemical characters with the corpuscles of the fluid of the lymphatic and mesenteric glands. In well-fed, thriving, and growing animals the number of these corpuscles in the thymus-juice is immense, for it is to them that the thickness, colour, and opacity of this juice are owing. On the other hand, in ill-fed, badly-nourished, or unhealthy animals, the juice of the thymus becomes thinned by a great diminution in the number of its corpuscles; and so remark-

FIG. 19.

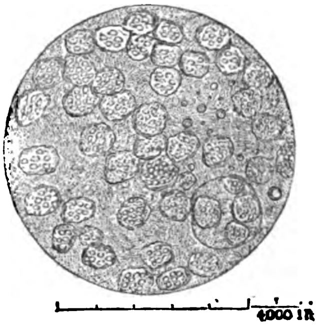

FIG. 19.—Thymus-juice rich in corpuscles, with a few secondary molecules, and the structureless, minutely granular base.

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able and quick may be the consumption of them under some such circumstances that we can produce it at will, just as we can keep an animal with a full stomach until it becomes more or less empty. For example, withhold food for many hours from one puppy of a litter, and then compare its thin, scanty thymus-juice with that of the other puppies well fed, and the contrast will be as great as between a moderately full and a nearly empty stomach. But, above all, to show how this drain of the juice is related to the wants of the economy, and that in direct connection with respiration and muscular fatigue, observe how soon the juice is diminished and thinned, while this impoverishment of it is due mainly to a disappearance of the nuclei (as shown in the Diagrams) in over-driven younglings and sucklings. Any observant butcher will truly tell you how quickly the sweetbread shrinks in lambs and calves thus treated, and so often have I verified this fact (App. to "Gerber's Anat.," p. 98) in over-driven lambs that it may be considered as completely established.

As to the size, chemical and other characters of the corpuscles of the thymus-juice, they are absolutely the same as in the corresponding objects of the juice of the lymphatic glands, and must be supposed to have the same functions. But as these nuclei are most abundant in the thymus, the action on a mass of them by different reagents is more remarkable. Thus the stiff, ropy, semi-transparent, and elastic grume (mentioned in the last Lecture), formed by a combination of these nuclei with alkalies, and with neutral alkaline and earthy salts, is best observed in the thymus-juice.

Except that it is regularly somewhat thinner, from abounding less in the corpuscles, the fluid in the efferent lymphatic vessels of the thymus is the same as that in the gland, when the animal is well fed and its thymus rich in juice. At other times, particularly after insufficient or bad nourishment, and especially following protracted fatigue, the lymph in those vessels will be nearly or quite colourless and transparent; or even of a slight ruddy hue, when this coloration will be found entirely owing to a few more or less imperfect red corpuscles. We have already described the corresponding phenomenon in the lymph which has emerged from the lymphatic glands. The other microscopical parts of the thymus-juice are also the same as those in the juice of the lymphatic glands; and though some of the primary molecules may be present, the molecular base of the chyle is wanting both in the thymus and lymphatic glands. But the secondary or unequal sized molecules are abundant in the thymus, and have the same characters and significance here as elsewhere.

Development of Red Corpuscles of Blood.—And this brings us to the consideration of Hewson's doctrine of the conversion of the colourless lymph-corpuscle into the red corpuscle of the blood, and which, indeed, is the doctrine of the present day. He erred in supposing this process to be exactly the same in Pyrenæmata and Apyrenæmata, and that in both these divisions of the vertebrates the lymph-corpuscle remains as a permanent part—a central particle—of the red corpuscle; while he did not detect the difference between that corpuscle and the pale cell. But this last error is even now prevalent, and the first is no more incorrect than the latest German view, which makes the conversion of the entire pale cell into the red corpuscle of blood a process identical in pyrenæmatous and apyrenæmatous vertebrates. But we have shown in a former Lecture (*Medical Times and Gazette*, December 13, 1862) that the difference of development is as remarkable as the difference of the mature structure; which must never be forgotten, for this very difference of structure in these red corpuscles is the only single universal and fundamental diagnostic between the two great sections of the vertebrate sub-kingdom, so that we call the oviparous group Vertebrata Pyrenæmata and the Mammalia Vertebrata Apyrenæmata. Now, with this signal difference of mature structure there is a like difference of development; and as the perfect structure used to be confounded so as to give rise to that "vexed question of a nucleus," the question of development has been and still is similarly confused, the error in both instances having arisen from applying what was correctly observed in one class incorrectly to another. In the Pyrenæmata the red corpuscle is formed by a conversion of the entire pale cell, the outer part or wall of which becomes coloured and takes on the figure of the mature red corpuscle, while the nucleus remains within, where it also undergoes certain modifications of shape, besides acquiring a degree of homogeneity of which it was not previously possessed within the pale cell. Thus, though the nucleus is circular in the pale corpuscle, it often becomes more or less oval in the mature red corpuscle; and though it is subject to cleavage or division by the action of acetic acid in the pale cell (Fig. 18, *c*, four last objects), it is no longer susceptible of this change when treated with the same acid in the red corpuscle. And this formation of the red corpuscle from the entire pale cell, which has long been and is now admitted as true of the Pyrenæmata, has also been commonly applied as well to the Apyrenæmata; but, according to Mr. Wharton Jones, erroneously, for in these last the red corpuscle is developed from the nucleus of the pale cell, while the cell-wall disappears. This nucleus, which is to become the regular or mature red corpuscle, may be sometimes seen to acquire its colour, though more or less faintly, even before its escape from that pale cell; and we have shown perfect red corpuscles as nuclei of pale cells (*Medical Times and Gazette*, August 16, 1862, Fig. 8). Thus the red corpuscle of Apyrenæmata is so far a nucleus as it arose from that of the pale cell, and never acquires such a very plain or distinct cell-wall as that of the red corpuscle of Pyrenæmata. But here the homogeny ceases altogether. The red corpuscle of Apyrenæmata, in spite of its genesis, is a peculiar body, and no longer a nucleus nor anything like one in any of its physical or chemical characters, as particularly described in the last Lecture. Thus, then, we have seen, notwithstanding these differences of detail, that it is agreed universally that the red corpuscle is generated from the pale cell; nor is it doubted that a chief supply of these or their foundations is from the lymph, though we have mentioned in the last Lecture that pale cells and certain red ones may and do arise quite independently of the lymphatic system.

Use and Relations of the Corpuscles of Lymph and Thymus-juice—To proceed now to consider some of the facts which indicate a relation of the lymphatic glands and thymus to the blood and respiration. In former Lectures (V. and IX., *Medical Times and Gazette*, Nov. 8, 1862, and Jan. 17, 1863) we have shown the immediate and essential agency of the red corpuscles in connection with the respiratory function of the higher animals; how, accordingly, the proportion of red corpuscles is generally connected directly with the demands for them, as carriers of oxygen in the service of that function; and how nature particularly adapts the sum of the surface of a given amount or mass of these corpuscles to those wants. The abundance of red corpuscles, and the corresponding animal heat and perfection of the lungs of Apyrenæmata and birds have long been known; and the tendency of the red corpuscles to become minute, so as to increase the sum of the surface of a given quantity or bulk of them according to the activity of respiration and the high temperature of the species in Apyrenæmata, while the larger size of the corpuscles and their smaller proportionate quantity or amount characterise the cold and less perfectly breathing vertebrates, as reptiles and fishes, was shown by various examples. Even some apparent exceptions throughout the vertebrate sub-kingdom turned out, on examination, rather to support than oppose this view. The warm and cold species of certain fishes, some of the hottest birds, and a few Apyrenæmata were thus surveyed. Take a brief example in the comparative temperature of the goat, sheep, and man; the proportion of red corpuscles relatively to the liquor sanguinis less in those two ruminants, and yet their temperature higher, than in the human subject; and this apparent anomaly, explicable by the fact of the immense extension of the sum of the surface of that proportion by the comparative minuteness of the corpuscles in those brutes (as shown in the Diagrams) just as the surface of a pound of lead would be greater in small than in large shot. In short, this adaptation of the sum of the surface of the red corpuscles to the respiratory activity and heat of the animal was shown, *cæteris paribus*, to assume the importance of a rule, with such exceptions as tended to prove the validity of that rule.

And thus we perceive how the abundance of red corpuscles is subservient to the respiratory function, and how the lymphatic glands and the thymus are subservient to sanguification,—indeed, to those very corpuscles. We have already particularly described how the pale nuclei of the juice of all those glands become colourless cells, and how the red corpuscles are formed from these cells; but this, of course, on mere histological ground. Let us therefore proceed to consider summarily, in conclusion, how far our present knowledge in the general and broader field of observation may elucidate this subject. Now, it is well known that the lymphatic glands and the thymus are most developed in the warm Apyrenæmata and birds, and least so or not at all in the cold inferior vertebrates; in fine, that the extent, and perfection, and comparative size of all these glands are not only greatest in animals with the most red corpuscles, but more especially so at that very time of life when growth, nutrition, and respiration, in immediate connection with the blood, are most active. And with this view the conclusions of recent authorities are reconcilable. Ecker regards all the so-called blood glands to be alike concerned as storehouses of nutritive matter, so that the excess may be always ready to be given up when required, while the supply of food to the stomach is only occasional. Æsterlin includes all these glands in the same category. And Mr. Simon, as the result of an important and independent set of observations, and by a course of inquiry varying from that which we have pursued, has expressed his conclusion in the following words:—"The thymus-gland fulfils its use as a sinking fund of nourishment in the service of respiration; . . . what the gland sequestrates from the circulation does, in gradually revisiting thither, accomplish those chemical purposes in respect of respiration and temperature, which, under other circumstances, are fulfilled by the effete products of active animal tissues." It has already been shown how far Hewson's observations and experiments on the lymphatic glands and thymus have been supported by my own inquiries; and the additional facts which I have now adduced tend generally to establish the soundness of his main conclusion. When, in the next Lectures, we come to treat of the lacteal system, we shall perceive so much more evidence in favour of the accuracy of his results as to make us regret that he did not live to extend his inquiries to the mesenteric glands and lacteals; for, had he done so, he would certainly have had the pleasure of increasing the proofs of the validity of his position.

Virchow and Hewson.—But a very important confirmation of Hewson's doctrine has flown in from an unexpected source, throwing a most valuable light on his tenets, and on some interesting points concerning inflammation and suppuration. No novelty in the history of disease has been recently better proved than the fact that an undue progeny of pale cells in the blood is either coincident with, or a direct consequence of, a morbid increase in the function and structure of the lymphatic glands. This instructive contribution to physiology and pathology, originally announced at Edinburgh by Professor Hughes Bennett, was soon afterwards confirmed in Germany by Professor Virchow, and gave rise to a controversy with which we need not trouble ourselves, as the parties are in the field to speak for themselves. But not so as concerns the achievements, nearly a century since, of British physiology during the brilliant period of the Hunters, with the exposition of a part whereof we have been engaged in this and the preceding Lecture, and, moreover, feel it in this place a duty, too long neglected elsewhere, to remonstrate against any foreign and native attempts to tear the laurels from the brow of one of the most illustrious disciples of that school. We might else be next deprived of the honour of such great discoveries as that of Harvey; be doomed to see them conveyed abroad, and imported back again to be presented and patronised as novel results of exotic genius for the admiration of our Profession at home; in short, to witness a general pollution of the truths of physiological history, and the sad spectacle of a nation indifferent to its own intellectual glory. For, though the Edinburgh professor had ingenuously recognised Hewson's claims, we must—"more in sorrow than in anger"—note the strange fact, gleaned entirely from the recently popular English version of the "Cellular Pathology," that the German professor absolutely claims for himself the discovery of the office of the lymphatic glands in connection with his so-called Leukæmia. And this, with the silent approbation of his English editor and the forbearance of the British periodical press, without the least notice of our countryman Hewson, to whom, as we have now so fully shown, that momentous discovery exclusively belongs.

The Girl with a Tiger's Skin.—There is a girl, fourteen years of age, now exhibiting at Brussels, who will in all probability be brought over for the London sight-seers at the Crystal Palace, whose skin is said to be traversed with small brown spots, covered with down, which, by their disposition and form, exactly resemble the stripes of the skin of the tiger. Moreover, she is fortified with a certificate, stating that her mother, having entered a menagerie during an early period of her pregnancy, underwent a remarkable emotion when she approached the den of the tiger therein.

ON THE

FALLACIES OF THE STATISTICAL METHOD AS APPLIED TO MEDICINE.

BEING THE HUNTERIAN ORATION FOR 1863, DELIVERED BEFORE THE HUNTERIAN SOCIETY.

By ROBERT BARNES, M.D.,
Fellow of the Royal College of Physicians, Obstetric Physician to, and Lecturer on Midwifery at, St. Thomas's Hospital.

The first great embarrassment that oppresses the orator of the Hunterian Society is, where to find a subject. The ordinary meetings are properly devoted to the discussion of strictly Medical topics. On those occasions we all have ample opportunity of expounding our particular views concerning the theory and practice of Medicine and Surgery. The oration, to present a distinctive character, must needs have for its text a less exclusively Professional subject. Hence the difficulty for one who is irrevocably bound by his daily duties to concentrate his attention upon the practice of Medicine, and indeed upon one limited department of that practice.

Seeking for a theme sufficiently remote from the business of our ordinary meetings, yet cognate to the great purpose we have in view, I have sought inspiration from that illustrious shade whose name the Society has adopted—adopted no doubt because its founder believed that working under the name—typifying the example of John Hunter, we could not fail to work in the right way for the advancement of Medical knowledge. Here, of course, I fell at once into a second embarrassment. Hunter's method of work has formed the theme of so many profound and eloquent discourses that it would be mere foolishness on my part to attempt another exposition of it.

But since Hunter's time there has arisen a new method, a new organon of Medical study, I mean what has been called by its great apostle, Louis, the "numerical method;" by others the "statistical method." The application of figures to the solution of physiological problems has so great a fascination for some minds; the generalisations, or "laws," as they are called, elaborated from this application exercise an influence so despotic upon others, that it becomes an object of paramount importance to examine well into the foundations of this method. Time itself is not more inexorable than figures. Whithersoever these may point there we must go. It behoves the student of Nature therefore to consider calmly, before he yields his reason to a tyrant so absolute, what it is that figures mean. In the first place, he must remember that figures mean nothing. They are mere abstractions. It is only when figures are put before things that they acquire significance. From the moment that we connect figures with things or "facts," we run into a labyrinth of dangers, where we may lose our way, and never find it again. Abstract or pure mathematics may lead to abstract or pure truth. Mathematics applied to certain simple and well-determined physical facts may lead to the discovery or to the establishment of new facts or laws. There is, perhaps, no more beautiful illustration of this than Adams and Leverrier seated in their closets, each by the application of mathematical processes, pointing out the precise spot in the heavens where a planet, hitherto unseen and unknown, might be found. But when we attempt by like processes to work out new facts and laws from the complex phenomena of biology, there is no such certainty. No great discovery in physiology has ever been made through the agency of mathematics. I submissively believe that two and two make four, but I do not believe that two rivers and two trees make four of either, or of anything else, unless it be that indefinite compound, a landscape. Granted that you are adding and comparing like things, then you keep within the sure boundary of abstract mathematics. You may eliminate the things or facts, and pursue the numerical method with safety to its uttermost conclusions. But where will you get this security? I am afraid very rarely in Medicine. There is nothing so difficult to arrive at as a good, honest observation or fact in Medicine. A Medical fact is a congeries of facts, a resultant of many facts, and figures can only represent like simple units. It is a task that seems to defy the greatest sagacity and patience to procure a residuum of a dozen good observations of facts divested of all disturbing concomitants, so as to be capable of being added together as like entities. But it is urged that such rigorous exactitude is not necessary in order to arrive at truth. Approximate facts are sufficient for the operations of the numerical method. This, of course, is to beg a great deal, perhaps the whole argument. At any rate, it throws the burden of proof upon the advocates of the method. Let us see how they set out their case. A statistical historian, Buckle, thus explains the difficulty:—"The apparent caprice and irregularity in small numbers arise from the perturbations produced by the operation of minor and unknown laws. In large numbers, the perturbations have a tendency to balance each other; and this I take to be the sole foundation of the accuracy obtained by striking an average."

Of course "perturbations" here mean errors of observation, or false facts; and we must work on till we get more false facts, which are to eat up the first. It requires some faith to abandon one's self to this application of the doctrine of equations.

Laplace expresses the statistical idea as follows:—"Dans une série d'évènements, indéfiniment prolongée, l'action des causes régulières et constantes doit l'emporter à la longue, sur celles des causes irregulières."

But in questions of Medicine, who can observe a series of events indefinitely prolonged?

Bouillaud says:—"La somme des ressemblances entre deux longues séries égales de faits relatifs à une seule et même maladie l'emporte de beaucoup sur celles de leur différences, et l'on peut, par conséquent, conclure de l'une à l'autre."

Of course, we live under the dominion of physical laws. Those laws are constant in their operation. It may therefore be certainly concluded that the human body will react in a uniform manner under the influences of like external agencies. But here again we are met by the extreme difficulty of getting full and accurate observations of these reactions. This difficulty is twofold. In the first place, the Medical observer can hardly avoid observing under the prepossession of some prevalent or peculiar Medical doctrine; that is, his observation will be apt to be more especially directed to certain phenomena, to the partial or complete exclusion of others. And it is worthy of remark that this tendency to observe partially, and in certain arbitrary directions, is calculated to lead to a collection of "facts" all coloured or distorted in like manner, and therefore not of the character assumed by the advocates of the numerical method. It appears to me impossible to assent to the postulate that the errors which will creep into any collection of observations will necessarily neutralise each other. They are in many cases quite as likely to strengthen each other, and to unite into a compact and unassailable body of falsehood.

In the second place, the argument of the numerical methodists assumes that we must have a large series of observations in order to eliminate error. Now, it is well known that no single Medical observer can hope to collect a mass of facts, drawn from his personal observations, sufficiently large to form a solid basis for statistical operations. We are, indeed, familiar with attempts of this kind. They are but so many examples of mis-spent labour, resulting either in utter confusion of ideas, or at the best in suggesting the necessity of further inquiry. It is found necessary therefore to enlarge the raw material of facts by accumulating the contributions of several or many observers. And here we let in new and unfathomable sources of error. No two observers will examine, interpret, and record in like manner. In the addition of the facts of various observers we accordingly often find materials heaped together that will not fuse into one homogeneous whole, but rather form a kind of conglomerate, or pudding-stone, in which the different natures and sources of the ingredients are plainly detected.

We owe the importation of the statistical method into Medicine, I think, greatly to the example of the chemists and other disciples of natural science. It here finds a most legitimate application. The striking of averages is the best mode of correcting errors of observation. For example, when the chemist, seeking to determine the composition of a body, makes several weighings of solid products, or several volumetrical estimates of the gases, and takes the mean of his results, no doubt he arrives at a more trustworthy conclusion than if he depended upon a single observation. So again, when the astronomer or the mariner takes several observations of the position of the sun, moon, or a star, he takes the surest means of correcting a possible error in his first observation. In these cases it is very likely that one error may be a little in excess, and another a little in deficiency. In the case of astronomical observations it is, indeed, notorious that some persons are unable to perceive and record with a sufficient approach to accuracy. For instance, some will always be behindhand in perceiving and registering the transit of a star. Still, in this case it is found that the errors of one observer are capable of being controlled by the observations of another. But the moment we depart from the observation of the physical world, and seek to apply statistics to biology, we lose all certainty. There is a school of statistical, political, and social economists,—a school which, for the solid benefits it has conferred upon society, deserves to be spoken of with the utmost respect. The disciples of this school, in and out of Parliament, are constantly appealing to "vital statistics." They reason admirably; and howsoever repugnant their conclusions may sometimes be to our individual instincts and experience, we are unable to resist them except by doubting that which they take for granted, and which they have no means of proving,—namely, the accuracy of the elemental facts of their statistical tables. Let me give an instance or two. In 1861 the census of this country was taken; it is the most magnificent statistical labour that we possess. We may assume that the aggregates of the district populations and the numbers of the sexes are nearly correct. We are not tempted to dispute the great result, that on a given day in 1861 there were counted in England 9,825,246 males, and 10,380,258 females. But descend ever so little into details. Take the ages of the sexes. Endeavour to determine the relative proportions of persons of different sexes of a given age: say 40. We may be quite certain to find 1000 women who have all concurred in the excusable frailty of understating their age, subtracting two or three years from 40, for example; but are we equally sure of finding another 1000 women willing to obliterate the error of their sisters, and for the sake of adjusting the statistical balance, to add two or three years to 40? Here, then, is an instance, taken from one of the simplest problems in vital statistics, where the errors are likely to be all in one direction, and by no means to be compensatory. Again, the most elaborate expositions have been given of the comparative morality of different counties and towns, as evinced by the proportions of illegitimate births to births in wedlock. To those who accept the population returns as the unquestionable, because official, expression of the real facts, nothing can be more convincing. To those who have opportunities of observing intimately the habits and conduct of different sections of the community, and the mode in which facts relating to births are registered, nothing is more fallacious. Whether London is more or less moral than any particular rural district I do not know; but this I know, that in London a very large proportion of births, both legitimate and illegitimate, escapes registration altogether; whilst it may be inferred from the closer subjection to observation, official, ministerial, and neighbourly, which obtains in the country, that the registration of births is much more complete there. So that if the pregnant single women seek refuge in any considerable proportion, as is certainly the case, in London, the proportion of legitimate births in the purged country district will rise, and exhibit a greater apparent rural morality. The entire neglect to register the births of still-born children is another source of fallacy much more serious than the pure statistician is aware of.

This defective registration of births vitiates a great many other statistical conclusions; here again, it must be observed that the errors of observation are all in one direction; that there is no compensation. I will trouble you with another example in which direct skilled observation is opposed to the teachings of our public statistical tables:—When it is sought to estimate the extent to which the population is protected against small-pox by vaccination, our statistical statesmen compare the number of registered vaccinations with the number of registered births. Now, I have already told you that the births are not all registered; we have therefore one element of the comparison erroneously stated, but the other element, the vaccinations, is still more erroneously stated; the unregistered vaccinations may be a fourth or a third of the whole vaccinations. Certainly the proportion is very large, and cannot be known, yet, in spite of these defects, which no amount of statistical faith will make mutually neutralising, a peer rises in Parliament to propose important measures, on the ground that as the proportion of registered vaccinations to registered births is 67 per cent. only, there must be exactly 33 per cent. of the population unprotected. Now, under this aggregate statistical statement a crowd of fallacies lies concealed; direct Medical observation alone can detect them. Of course there is a large number of children vaccinated by private Practitioners whose vaccinations are not registered at all; this number cannot be determined with any accuracy; it is an unknown element. Then there is a large number of children who perish before they are three months old—too soon to be vaccinated. Then there is a large deduction to be made from the returns of successful vaccination, on the score that the "success" of the operation is often assumed rather than proved. It may be that these and other errors may exactly counterbalance each other, so that out of many contending falsehoods we may obtain a residuum of truth. But strong must be the faith of the Medical observer who can adopt the conclusions of the statistical peer. I have endeavoured by direct observation to test the actual protection enjoyed by the population. In this attempt I relied partly upon the actual inspection of the traces of vaccination upon 264 children assembled in two public schools. Of this number I found that 8 had had the small-pox, that 164 only (or 60 per cent.) showed good scars, and 56 bad or imperfect scars. Thus, although 80 per cent. had been vaccinated, I concluded that 95 children, or 36 per cent., were either altogether unprotected, or but imperfectly so. I caused these 95 children to be submitted to what I may call experimental vaccination. The result was, that in 49 cases the vaccine vesicle was complete in all its characters, and modified in 33 more. It is further possible that re-vaccination of those children whose scars were good might have shown susceptibility in a certain proportion. At any rate, we have here an example of the necessity of controlling by direct Medical observation the deductions of gross public statistics.

Much the same objections apply to the nosological tables of the Registrar-General; and, were it not for the continual corrections brought to bear upon these piles of figures by the direct observations and reasonings of practical Physicians, they would soon lose all authority and use, in consequence of the absurdity of the conclusions which the pure statisticians would evolve out of them. For example, the most incongruous diseases are added together under the same name or heading. Thus, under the word "typhus" are classed together every form of disease of which febrile excitement, or prostration with a brown tongue may be a symptom, including many cases which in no strict Medical language can be called fever; and, for climax of absurdity, it may very well happen, and almost certainly has happened, that for a whole year there may not have been a single case of true "typhus" to justify the heading which records, for the uses of statisticians and the delusion of the unwary, many hundreds of cases. Yet it seems impossible to attempt to attain greater accuracy by subdividing this or some other heads. No dependence could be placed upon returns which should pretend to distinguish between "typhus," "typhoid," "relapsing," or other forms of fever. We are obliged to be content with one general term, under which a variety of heterogeneous diseases are muddled together, defying analysis and comprehension. Nor must it be supposed that the headings typhus, measles, scarlatina, whooping-cough, diarrhœa, cholera, and the other titles which make up the zymotic order, or the class of epidemic diseases, at all adequately represent what they profess. They include many cases which have no character of epidemy or zymosis about them; and they probably exclude an immense number of cases which are as truly zymotic as the most undoubted cases of scarlatina. Now, so far from errors of this kind serving to neutralise each other, they have the opposite effect. Tables and headings assumed to represent bodies of facts, but which necessarily keep the elemental facts out of sight, are so compact and invulnerable that the mind readily gives its assent to what they seem to teach. Error is so effectually concealed that by no art of the closet philosopher can it be detected and appreciated. We cannot bring forth a single original fact out of the mass in order to submit it to the test of cross-examination, without which no evidence is trustworthy. If we would form an approach to a correct interpretation of these tables setting forth the causes of death, we must go back again to direct Medical observation, and appeal to the experience and the judgment of Physicians who are not statisticians. Thus criticising the Registrar-General's tables, I would venture to submit an opinion suggested to me by repeated observations, namely, that a very large proportion of the cases of "pneumonia" and of "bronchitis," especially of those occurring in children under the age of five years, are in reality cases of zymotic disease. They are, in short, simply masked forms of typhus, typhoid, measles, or other varieties of fever. In the winter, pneumonia replaces the diarrhœa of the summer. Just as in hot weather, the zymotic poison taken into the blood expends its violence upon the mucous membrane of the intestines, so in winter it is directed to the mucous membrane of the lungs. The same causes developing poisons are acting with more or less vigour throughout the year. There is no sanitary error more serious than the assumption that the development of poisons from the decomposition or fermentation of animal matter, as from the excretions discharged from the bowels, kidneys, skin, and lungs, is arrested during cold weather. A little reflection will show that there exist in cold weather conditions tending to promote greater activity in the generation of some forms of animal miasmata. Thus in winter there is commonly more overcrowding, less exposure to the purifying influence of fresh air and light, less cleanliness, whilst the rarefaction of the air in the rooms by fires and by habitation, draws in the emanations of cesspools, privies, drains, gulleys from the basement. It must also be remembered that, howsoever cold the upper air may be, the contents of our sewers are not known to freeze,—on the contrary, the temperature of sewage rarely falls below 50°, and the generation of morbific gases is constantly going on. All these elements of poison are concentrated by closing the windows. Under the warmth of the rooms, which are literally receivers of foul matters, poisonous gases are generated, which children, the most susceptible victims, breathe over and over again, perhaps all day as well as all night long. It is not reasonable to suppose that exposure so prolonged to poison so concentrated finds its full expression in the comparatively small number of cases of scarlatina, measles, and fever, which are registered in the winter. I could cite many illustrations of the truth of the proposition I have advanced, that pneumonia is more frequently a symptom or manifestation of some kind of blood disease or fever than a simple local phlegmasia. I will only mention one more. In the statistics of childbed mortality, it is customary to exclude cases of death from bronchitis, pneumonia, and phthisis. Now, on the clearest pathological evidence, I can show that the bronchitis and pneumonia which occur during the first few days of childbirth are commonly nothing more or less than manifestations of puerperal fever. Sometimes it happens that the patient sinks under the chest symptoms alone; but not seldom other well-recognised symptoms of puerperal fever, such as diarrhœa, tympanitis, abdominal and pelvic pain, phlegmasia dolens, will be superadded. Statistics serve to conceal or exclude such facts as these, and to perpetuate error.

It will not escape observation that pneumonia is one of the favourite subjects of statistical operations and comparison. Pneumonia has been selected as the disease which most perfectly answers to the great statistical requirements of homogeneity, of individuality, of uniformity. Yet how baseless is the idea. How vain must be the deductions from statistics composed of elements so variously uncertain! What volumes of elaborate reasoning crumble away under the touch of healthy Medical observation!

(To be continued.)

ANTHROPOLOGICAL SOCIETY OF LONDON.—NOVEMBER 3, 1863.—Dr. James Hunt, F.S.A., President, in the chair. Five new members were elected. A paper was read by C. Carter Blake, Esq., F.G.S., "On the Anthropological Papers read at the British Association at Newcastle;" and another by Prof. John Marshall, F.R.S., "On the Superficial Convolutions of a Microcephalic Brain," which had been already described before the Society by R. T. Gore, Esq., of Bath. Mr. Geo. E. Roberts, F.A.S.L., read a paper by himself and Professor Busk, F.R.S., "On the Opening of a Cyst of the Stone Age on the Moray Firth," in which some remarkable human remains, obtained by the former gentleman, were described. The last paper of the evening was by Captain Eustace W. Jacob, "On the Indian Tribes of Vancouver's Island." The Society adjourned till the 17th instant, when Dr. James Hunt will read a paper on the "Negro, his Place in Nature."

REMARKABLE SUICIDE.—On Saturday last a lad of 13 years of age committed suicide by hanging himself. He was known to be of a most violent temper, and had previously quarrelled with his sister. The body was taken to University College Hospital, where persevering but unavailing attempts were made to restore animation by artificial respiration.

ORIGINAL COMMUNICATIONS.

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CASES OF EPILEPSY, CONVULSIONS, GIDDINESS, ETC.

PART OF A SERIES ILLUSTRATING AFFECTIONS OF THE NERVOUS SYSTEM, OF ORGANIC AND INORGANIC ORIGIN, WITH CLINICAL AND PATHOLOGICAL OBSERVATIONS.

By JOHN W. OGLE, M.D., F.R.C.P.
Assistant-Physician to, and Lecturer on Medical Pathology at, St. George's Hospital.

(Continued from page 325.)

Case 50.—George P., aged 17, a fishing-boy in the Thames. Was subject to "fits" when seven years old for several months; they then ceased until he was 13 years old, when they recurred for two years, and again ceased until the two months before his application at the Hospital, when he had two or three.

The attacks were described as lasting about five minutes, during which time consciousness was lost, and for two days previously he was always subject to a "detriment of speech," as it was termed. There was never any bitten tongue or foaming at the mouth. The attacks were apt to occur either in sleep or after dinner, and he was in the habit of eating much. The pupils were natural, and the muscles of the arms and legs unaffected. The pulse was small; the skin apt to be cold; the tongue furred, and the bowels costive. He was said to have "the bile bad." The urine was natural.

Ordered the saccharated carbonate of iron, and an alkaline aperient powder daily.

This treatment was continued for five weeks, when, at his own request, he ceased to attend. No return of fits, or of any unpleasant sensations had occurred during this period.

It should have been stated that this boy had a sister who was in an asylum; also another who had fits when young, and a brother who was subject to them.

Case 51.—Thomas J., aged 16, was affected when about 2 years old with fits, which first came on six hours after receiving a fall. These continued for two years, and then ceased altogether until a few months before application to the Hospital, when they recurred, coming on about twice a week; they were generally preceded by a "shaking" all over, which lasted about two minutes, but by no other warning or any pain. The attacks were attended by biting of the tongue and unconsciousness, continuing about ten minutes, and in them he was described as "going as black as a coal."

The pupils were large; equal. Tongue indented by teeth at the sides; bowels regular.

Ordered quinine and iron, and subsequently iodide of potassium, with occasional aperients, and extract belladonna half a grain every night. He went on much the same as to the attacks, and feeling better for three weeks, when he had a bad seizure, changing colour as before. Three weeks again passed without any attack, and then a fortnight with only one, a slight one, and subsequently a month without any, the treatment being pursued. Then he had three in the course of eight days, then one in eleven days, then one in a week's time, for the last three weeks of which he was taking the extract of belladonna in one grain doses every night. He then ceased attendance.

Case 52.—Margaret C., aged 16, had been subject to epileptic attacks for one year and a-half, in which the tongue was bitten. Catamenia regular; bowels regular; ascarides complained of, as also pain at the cardiac region.

Had an attack the day preceding application to the Hospital. Ordered quinine and iron; also scammony powders every morning. She went on for six weeks without any recurrence of attacks, but she had several times "been queer." She states that she could often keep off the fits by letting cold water flow on to her hands from the water-tap.

Case 53.—Mary W., aged 19, with a healthy family history. For five years had been the subject of epileptic attacks, which for the most part occurred once a month. She generally had a feeling of "nervousness" and "confusion all over" and "dazzling of light" for about ten minutes before the attacks. At one time the attacks were absent for three months, and recurred after receiving a kick from a horse on the forehead. The pulse was feeble and rather quick.

Ordered the syrup of iodide of iron and occasional alkaline aperients.

At the end of a fortnight headache was complained of, but no fits occurred for five weeks. Another fit occurred in the course of the next three weeks, and this was followed by an eruption on the face. The tonics were continued, varied by aloetic purges, and latterly by expectorants, etc., owing to a little bronchitic attack, for about eight weeks longer, during which time there was no recurrence of the fits, although she had, as she described, the "feelings" of fits coming on, which she kept off by "engaging herself in things." I then lost sight of the patient.

Case 54.—James L., aged 14 years. For 3½ years had been subject to epileptic attacks, which occurred at first once a month, but latterly once in eight or nine days. No cause was known for the attacks, and no other members of the family had had any such: no regular warning preceded them, but before they came on there was often a pain at the left side of the neck, and they for the most part took place about 4 a.m. During the fits the eyes were fixed, there was much "stuttering noise," "shaking all over," the "mouth filled with spittle," and he "laid and blowed" for about ten minutes, and then went to sleep.

The urine was often forcibly passed in the attacks. No worms were known to have existed, and he had taken turpentine ineffectually.

Ordered the syrup of iodide of iron and calomel and jalap aperients. No worms were passed by the bowels afterwards, and the treatment was continued for one week, during which time one attack occurred. It was persevered in for six weeks longer, varied only by the quinine and iron towards the last. No more fits occurred. After that I lost sight of the patient.

Case 55.—Louisa R., aged 22. Pale, but healthy, and of healthy family. Was for the first time in her life the subject of epileptic attacks one month previous to her appearance at the Hospital. They came on during the catamenial period, and had occurred several times a-day, occasionally only a single day passing without them. During their occurrence she remains unconscious for from twenty to thirty minutes with clenched hands. She does not, however, bite the tongue or foam at the mouth. The attacks are preceded by giddiness and palpitation of the heart, and are followed by sleepiness and a "feeling of silliness." The catamenia are generally regular as to time, but profuse and painful. Bowels regular, tongue and lips pale.

Ordered quassia and iron, which was continued for three weeks, the attacks continuing much as usual. She then passed three days without any attack recurring, and for the next fortnight had one about every other day. She then had a tendency to a fit whilst in the Hospital waiting-room, but the senses were not lost. She had, however, palpitation, fainting, clenching of both hands. No pain. Expression of the eyes afterwards very heavy; both the pupils were equal, acting fairly well, and of ordinary size.

She took the liquor galii alb. ʒiij. in the infusion of valerian three times a-day, along with occasional colocynth pills. As no improvement followed, she had a blister applied to the back of the neck. After this she never appeared at the Hospital.

Case 56.—Anne M., aged 22, healthy-looking, had been for four years subject to epileptic attacks, thought to have been caused by fright. They occurred at irregular intervals—sometimes only once a month, at others twice in one week; always worse at catamenial periods. They were always preceded by "jumpings" of the whole body, which lasted two or three hours, and was followed by stupor and headache. The least excitement would tend to bring them on. She had an attack in my presence. She suddenly fell down as if shot, foamed at the mouth, struggled, and turned of a pale leaden colour; the pupils became much dilated, though remaining equal, and the pulse very frequent, though feeble. This attack lasted about ten minutes.

The catamenia were regular, but scanty; tongue clean; she was losing flesh.

Ordered the bromide of potassium, along with mist. ferri co. and dec. of aloes co.

Two weeks afterwards there had been no fits, but there was much complaint of headache. One week later, no attacks; the head still bad. One week later, there had been one fit, and that a severe one, without ostensible cause. One week later, another fit, also severe. One week later, two fits, also bad. One week later, no fit, but still pain in the head, and much starting of the body. She was at that time taking the syrup of the iodide, along with the bromide of iron, and aloes, and myrrh pills. I prescribed an emetic, and at the end of another week there had been two fits, but she thought she had kept off one or two attacks by the emetics. She then took the extract of belladonna, in conjunction with the other medicine and the emetics. One week was then passed without a fit, then another with one; she still thought the emetics cut them short. Then a week without a fit; then another week without one, but certain "jumpings" of the body instead. Then another week with one fit. Throughout, she thought that emetics had several times arrested the attacks.

I afterwards missed the patient for five months, when she returned, saying that she had had no attacks for nine weeks, but was much troubled with headache, chiefly the forehead. The catamenia were very irregular and painful. Ordered the mist. ferri co. At the end of a week she had had no regular fit, but had lost consciousness on three occasions. Valerian was added to medicine. At the end of another week she had had several attacks of uneasiness, with much palpitation, preceded by much flushing of the face, and had much pain in forehead, as also under the cardiac region. These were, at the end of a week, still continuing, and had not been kept off by emetics. Quinine, iron, and valerian were then given, and at the end of a week the "faintings," as she termed them, had been daily, but not so severe.

I then entirely lost sight of the patient.

Case 57.—Elizabeth M., aged 15, healthy-looking, and of healthy family; had had within the previous two weeks two epileptic attacks, in which she foamed at the mouth and bit the tongue. The catamenia had never appeared. The pulse was small and week. Bowels open with medicine. No worms known to exist. Ordered quinine and iron three times a-day, and a shower-bath every other morning, with occasional rhubarb and magnesia, and subsequently the sulphate of zinc in addition. This treatment was continued thirteen weeks, during which no more attacks occurred. The catamenia, however, did not make their appearance. She then ceased to attend.

Case 58.—Mary A. F., aged 22, had been under my care for dyspepsia in some form or other. She subsequently applied owing to certain attacks which she had, generally, daily or twice a-day even (though she occasionally passed a week without any), in which for three or four minutes, or even at times for a quarter of an hour, she almost, but not quite, lost her consciousness, and became pale in the face. She, however, was able often to sit down or even walk about in the seizures feeling very stupid. The catamenia were regular; the pulse feeble but regular. Bowels confined; no cause for the attacks known. Ordered M. ferri co. and potass. bromid. bis die. This treatment, substituted by quassia and iron with chloric ether, was continued for four weeks, during which time the attacks had only been four in number. At the end of another week they had been relatively more frequent. Ordered syrup of iod. iron, assafœtida pills, and shower-baths every other day. The attacks appeared to have a connection with the catamenia. Afterwards she passed one month with only three attacks, two of which occurred directly after her shower-baths.

The mixture and baths were continued, and she was discharged three months after first application as being well.

Case 59.—Rose H., aged 20, for one year had been subject to epileptic attacks, which at first came on every four weeks, but subsequently every two weeks. They had no apparent cause, the first one occurring whilst she was going up stairs. In the attacks she generally fell down suddenly, always without any warning, and remained dull and giddy for a period varying from a few minutes up to an hour; they were mostly followed by headache, sickness, and exhaustion, but not by sleep. The catamenia were regular, but very slight, and attended by much pain. Urine natural. She generally had a headache. The pupils of the eyes were natural; pulse very feeble, and skin cool; feet generally cold. Ordered the syrup of iodide of iron and bromide of potassium with chloric ether.

Five weeks passed without any attacks whatever, the treatment being only varied by aperients as required. The catamenia returned after an absence of six weeks, and only slightly, and at the same time an epileptic attack occurred.

Quinine and iron then ordered, and at end of another week there had been two more attacks both at early morning. During the two following weeks several attacks occurred, chiefly during the night, and without any warning. Then two weeks passed free from any seizures. During this time the decoct. aloes co. had been added to her medicine, and extract belladonna given twice a-day. The patient then ceased to attend.

Case 60.—Walter S., aged 23, had been subject to epileptic attacks since he was 14½ years old, occurring once or twice a-week. There was no warning of the attack. Acknowledged to having practised solitary indulgence greatly; never had syphilis; urine natural.

Ordered iron, valerian, and chloric ether, and subsequently extract belladonnæ, half a grain every night. Afterwards he took strychnine and iodide of potassium.

He went on for nine weeks without any alteration, and then left off attending.

Case 61.—Eliza H., aged 22, of healthy family, thin, but healthy looking, had been for twelve years subject to attacks in which she lost consciousness for about five minutes, and remained stupid and heavy all the day afterwards. They generally occurred once in two or three weeks, and she sometimes bit her tongue when in them. She had no warning of them. She generally complained of a heaviness of her head, and her pulse was rather feeble but regular. Catamenia regular. Had slight cough, with mucous expectoration.

Ordered quassia and syrup of iodide of iron, with squill pills. She continued six weeks under this treatment, having attacks about every two weeks, when I lost sight of her.

Case 62.—Louisa E., aged 22, a married woman, had two epileptic attacks six months before her application for treatment, one a day or two before, attended with foaming and "working" at the mouth, biting of the tongue. No warning existed, and in the earlier attacks, which occurred about nine o'clock p.m., she lost consciousness during most part of the night, but did not scream. The catamenia were scanty, but the attacks did not occur at those periods. After the attacks the memory was apt to be very defective, and there was also generally headache and a tendency to sleep.

The pulse was weak, but regular; the pupils acting well, the right one being the largest.

There was slight cough, and some tightness and wheezing of the chest on lying down. The respiratory murmur was somewhat feeble on auscultation.

Ordered the saccharated carb. of iron, and occasional aperients of senna and jalap.

No attacks occurred for three weeks, at the end of which time the patient ceased to attend.

Case 63.—Jane A., aged 25, had been subject to epileptic attacks for fourteen years, which by herself were attributed to the effects of a dream, and by her friends to the "suppression of feeling." The attacks were preceded by a sensation of choking, lasting for five minutes, but otherwise were unattended by any warning. At times she could stop the attacks by an action of the will. They were generally attended by foaming and sometimes by a bitten tongue, and occurred for the most part during the night, and, until lately, happened generally very shortly before, or following, the catamenial period; for the most part they occurred once, occasionally twice, a month, and ordinarily lasted about a quarter of an hour.

The pulse was tolerably good; the heart's action and sounds natural; the catamenia had been altogether absent for seven months.

Ordered the saccharated carbonate of iron three times a day, and an emetic, to be taken whenever there was any threatening of an attack.

At the end of the first week no attacks had occurred, then there were two, one of which I witnessed; in this the face became purple; there was also foaming at the mouth, but no biting of the tongue, and the pupils were somewhat small and insensible to the action of light.

After the attack the pupils became much larger, and headache was complained of.

The treatment was persevered in for eight weeks, only varied by occasional doses of senna. At the end of the second week three fits had occurred. At the end of two more weeks four fits, and at the end of two more weeks there had been no fits, only peculiar "sensations" experienced. A convulsive attack then occurred, whilst the patient was waiting in the Hospital to be seen.

Attendance was then discontinued.

Case 64.—Elizabeth D., aged 24. Was burnt considerably when 12 years of age, which brought on epileptic attacks, which had occurred ever since—three or four a week. In the attacks she lost consciousness, and always bit the tongue, foamed at the mouth, and "worked much about."

The bowels were generally costive and the catamenia irregular, but there was no proofs that the attacks were in any way connected with the catamenial periods. She was subject to headache, and pains across the eyes, and also frequently to flatulence. The attacks were not preceded by any warning. Ordered the mist. ferri. co. and dec. aloes co.

At the end of ten days she had had five attacks, and at the end of another week three more fits. At the end of another week she had had two attacks, which she described as being "less severe." The medicine was still continued, and at the end of the next week one attack only had occurred, and this was unattended by biting of the tongue, and preceded by a sensation of "heaviness," but no headache. She then took the mist. ferri co., along with the decoction of aloes and tincture of valerian.

Another week was passed, during which two attacks happened, followed by sleep. Two more weeks passed, in which no attacks occurred.

I then lost sight of the patient.

Case 65.—Eliz. B., aged 21, of healthy family, subject to headaches, constipation, and amenorrhœa; had had two attacks of convulsions during the week before her application, during which she bit the tongue. They came on during the night. She had also on several occasions vomited a quantity of black stuff. Ordered an emetic at once, and the decoction of aloes with liq. potassæ three times a-day afterwards, valerian and chloric ether, and then the mist. ferri and aloes. Under this treatment she continued for three months without having any attacks, and expressing herself as being "better," but was still terrified at nights. After a month four fits came on in one week, each beginning as if by choking, and being preluded by pain in the bowels, described as "going to the head," and "passing across the eyes." Three weeks were then passed without fits, when two occurred; then two weeks without, when one occurred. She then ceased to attend.

Case 66.—Adeliza C., aged 21, healthy-looking, with good family history, had been subject to epileptic attacks ever since she was teething, when a year and a-half old. Formerly she used to know that a fit was approaching by sickness and vomiting which came on. Latterly there had been no such warning. Frequently she could prevent the attacks by using a hot bath. During the attacks the mouth was drawn to the left side, and she was unconscious for about an hour and a-half. She also generally fell down towards the right side. Speech was generally "thick," and her "ideas slow," the memory being, however, good, and she was subject to pain across the loins. The pupils of both eyes were very large, but equal, acting but sluggishly. The catamenia were regular, but she was subject to leucorrhœa. The pulse was feeble; tongue red. Pains in the head at times complained of. It seemed that Mr. Gillingham, of Fulham, had treated her with the liquor galii alb., but after a time had relinquished its use, as it appeared to render the pain in the head worse. Ordered quinine and syrup of iodide of iron, bis die; ext. belladonnæ, gr. ⅓, omni nocte. At the end of a week there had been five fits, but no pain in the back. Treatment continued for one month, the attacks being much about as numerous as before. The belladonna was then increased to half a grain night and morning. The attacks then became less frequent, but in the course of two weeks I saw no more of the patient.

(To be continued.)

A CASE OF LACERATION OF THE VAGINA DURING LABOUR—A MEDICO-LEGAL QUESTION.

By ROBERT FOWLER, M.D.

On Sunday, September 28, 1862, at 9.30 p.m., I was hurriedly sent for by Mrs. Lewis, midwife, to attend Eliza K., aged 40, 12, Rose-alley. She had had five previous children, the two last being twins, since dead. I found her in a wretched room, destitute of everything, food, firing, body and bed linen, and lying on a filthy bed and bedstead. She was in a complete state of collapse; countenance pale and anxious; tongue and breath cold; whole surface of body pallid, cold and almost naked. Pulse scarcely perceptible, if not quite imperceptible, at the wrists. Great restlessness. Breathing laborious, and accompanied with mucous rattles. There was not the slightest uterine pain.

It appears labour had come on about 7 o'clock that evening, and when Mrs. Lewis attended about 8, she found a natural presentation and regular pains, the os being well dilated. In a few minutes the membranes ruptured with an audible noise, and the head came down steadily and regularly. About 9 o'clock Mrs. Lewis was alarmed by observing, after a few severer pains than usual, a sudden change come over the countenance of the patient, who appeared to be sinking. All uterine action suddenly stopped, and the belly immediately became flaccid, the uterine tumour subsided, and the limbs of the child could be easily felt by the hand externally.

There was not the slightest external hæmorrhage. At the time this alteration occurred the head of the child was so low down (nearly resting on the perinæum) that Mrs. Lewis fully expected the labour would, with a few pains, be speedily over.

On the occurrence of the change, Mrs. Lewis immediately administered some gin, being the only stimulant at hand, but which was immediately vomited by the patient, who, on my arrival, was, in addition to her other symptoms above detailed, constantly vomiting in jerks a liquid of a dirty light-brown colour.

Whatever the actual nature of the severe internal mischief occasioning these symptoms, one method of treatment only could ensure the patient the least chance of safety, and that was speedy delivery. As soon as I could obtain some brandy, I administered a tablespoonful in some hot water, holding a scruple of ergot powder in suspension. It was speedily rejected, as also was another similar dose in a quarter of an hour afterwards. By this time I had returned from running home to fetch my obstetric instruments, and then found some slight uterine action. I attempted at first to encourage this with brandy, and the application of such a bandage as we could on the spur of the moment obtain. This application she resisted as much as possible, alleging that it caused her excessive pain, and before long her constant restlessness had loosened all the pins. Friction with the hand she also resisted, as being too painful. Time had now gone on to probably about 10, or perhaps a quarter past, when I commenced the application of the forceps. I adopted this mode of delivery both on account of the position of the head being so low in the pelvis, and also from its giving me the impression at first of its occupying too fully the cavity to admit of the introduction of the hand for turning. I was unable to get the elastic catheter between the head and the symphysis into the bladder. Uterine action instead of increasing was evidently decreasing, and the general symptoms of collapse and sinking not only continued, but were undoubtedly augmenting. I experienced no difficulty in the introduction of the blades, saving that, in consequence of the patient constantly sinking into a hollow of the bedstead's sacking, from which the mere excuse of the thin and filthy bed did not protect her, I was somewhat interrupted by having to keep lifting her nearer to the foot of the bedstead to enable me to sufficiently depress the handle of the anterior blade. I readily locked the blades and commenced traction, but after using as much force, and as often as I thought necessary, I found that I made no progress in bringing down the head. I consequently withdrew the blades, intending to complete delivery by perforating. On feeling for a good firm spot on the head for the perforator, using slight pressure therewith, and whilst the midwife was steadying and pressing down the uterus externally, the head, which just then was so low as to be almost visible on slightly separating the labia, suddenly receded. I instantly seized the opportunity of withdrawing the perforator, and passing my left hand (already partially in the vagina) up along with the head, and then over the body of the child until I came to a knee. This latter I brought down, followed by its foot (the right). It required the use of the blunt hook to bring down the left thigh and foot. The body was easily born, but the two arms got up between the head and the brim, and required some little time to release them, especially the right. The forehead then turned into the hollow of the sacrum, and after some little difficulty the head was born, at about ten minutes to eleven. The placenta was lying loose at the mouth of the uterus, and was instantly and easily brought away. There was some amount of hæmorrhage, but not to an alarming extent. During the operation the attendants were constantly exhibiting brandy. The restlessness and vomiting were continuous and constant during the whole time, and there was no appearance whatever of rallying.

Immediately after the delivery of a full-grown, large, male child, still-born, I proceeded to attempt to ensure perfect contraction of the womb. The slightest friction of the hand caused the mother great pain, and she repeatedly resisted it. The bandage and pad were no sooner on than she got them off again. I sent my assistant home for the following mixture:—℞ Æth. chloric., tinct. lavand. co., sp. ammon. co., āā. ʒij., liq. opii. sed. ʒij., mist. camph. ℥vi. M. A sixth part every third hour. The first dose of this mixture was retained on the stomach, and the vomiting ceased for a whole half hour. It then recommenced. By about 11.30 we had got a little gruel for her, in which we administered the brandy, but almost each dose every half hour returned. I left her at 12.30 a.m. September 29, having given her just previously another dose of her medicine.

The prognosis was of course of the very worst. Mrs. Lewis remained with her till about 3 or 4 a.m. administering the brandy and gruel every half hour, and the medicine every two hours. When she left the symptoms were scarcely, if at all, changed.

Before leaving her, I was told by her sister (a Mrs. McSwiney) that the poor woman had about 2 o'clock on the Saturday morning previous to her confinement (which she expected daily) been cruelly ill-used by her husband, Stephen Keefe, a blind piper. He had not only beaten her about the head with his stick, struck her in the face with his fists, but had with his boots on kicked her in the lower part of the right side of the belly, from the effects of which she had fallen heavily on the floor, and there lay for about half an hour, scarcely able to move. She afterwards slept all night on the stairs, fearing to go back to her room, which she did, however, about seven the same morning; and appears until her labour came on to have gone about her duties, complaining but slightly of her side. At 9 a.m., September 30, I ordered from the Relieving Officer everything I thought requisite for the poor creature in the shape of food, covering, clothes, and a nurse. Medicinal and other treatment was persisted in, but without producing any alteration in the symptoms. Everything was brought up by the vomiting.

12 noon.—Pulse scarcely perceptible; great pain and tenderness over the whole belly; constant vomiting of a dark brown coloured fluid (almost the colour of coffee grounds); breathing laborious, accompanied with moist râles; great pain under and about the right shoulder, which from the first application of the bandage she had complained of, and which she persisted in saying the bandage made worse. There had been scarcely any discharge. The uterus was contracted, but not very hard. It reached about midway to the umbilicus. She gradually sank, and died about 12 p.m., having been again visited about an hour previous.

On her husband being told of her death, he said it was that d——d Doctor that had killed her. This report, of course, spread quickly over the neighbourhood. Therefore when I was applied to next morning for the certificate of death I deemed it my duty to refuse it, and informed the ward beadle that in my opinion the man's violence was the cause of the internal injury which had resulted in the woman's death. I also directed the beadle to tell the Coroner that, in consequence of the charge made against me, I should wish that he would appoint some other independent Medical man to perform the post-mortem examination. This was done at 10 a.m. on Thursday, October 2, by Luther Holden, Esq., Assistant-Surgeon at St. Bartholomew's Hospital, in my presence. The bodies were in such a state of decomposition that it was impossible to determine the existence or not of any external mark of violence. On opening the woman's belly there was found in the cavity of the peritoneum about half a pint of blood, and on tracing for its source we found an extensive transverse laceration of the posterior wall of the vagina, near its junction with the cervix uteri. It was capable of admitting the width of four fingers. The small portion still attached to the cervix was much ecchymosed and pulpy. The posterior surface of the womb was of a purplish colour. The cavity of the womb, which was of great thickness, was perfectly empty, having only a few very small coagula within it. The organ was not thoroughly contracted. Old pleural adhesions were found about the two upper parts of the right lung, and both lungs were emphysematous.

The child's head showed the marks of both blades of the forceps, and also a slight graze over the right parietal, doubtless from the point of the perforator.

At the inquest, two very important questions arose—1st. Was the injury found after death (and from which undoubtedly the woman died) the result of the violence sworn to having been received at 2 a.m. on Saturday, September 27? Both Mr. Holden and myself (after I had detailed the full particulars to that gentleman) agreed in opinion that the kick produced a certain amount of injury—either a bruise or a slight laceration of the spot—which, during the progress of the labour, became, by the force of the pains, converted or extended into the large laceration detected after death.

Ramsbotham says ("Obstetric Medicine and Surgery," Second Edition, p. 470):—"It must not be forgotten, however, that by a fall or other accident the uterus may be so much injured as to induce a degree of disease that will predispose it to lacerate at that spot where the blow was inflicted, when it takes on itself expulsive action," and, in a note to this sentence, observes, "Perfect relates an instance (case 78) in which a fall six weeks previously seemed to be the predisposing cause of rupture during labour."

The second question arose after the coroner had received the evidence of my having resorted to instrumental delivery, and subsequently to version, viz.:—Whether the forceps or the operation of turning had anything to do with the production of the laceration? To this very important query—important not only to the husband of the deceased, but also important to my reputation and to my skill—I feel morally certain that every practical accoucheur, and every obstetric authority, will accord with the following common sense and very intelligible response:—That, whereas those symptoms which are recognised by all teachers and practitioners of Midwifery as indicative of the occurrence of either rupture of the womb, or of laceration of the vagina during labour, are sworn to by the midwife as having actually taken place and originated prior to her sending for my assistance—*ergo*, the cause which occasioned those symptoms must have occurred previous to my even seeing the patient: consequently neither my hand nor my instruments could have been the means of producing that cause or laceration. After hearing the evidence, the jury returned a verdict of manslaughter against the husband, and that no blame was attached to the Medical man.

The husband was subsequently tried at the Old Bailey sessions in the following October before the Recorder, Russell Gurney, Esq., was convicted, and sentenced to fifteen years' transportation. The prisoner, who was undefended, cross-examined all the witnesses, although in violent language yet, with a certain degree of skill and acumen. He pressed me closely on the question as to whether the injury might not have been caused by the operation of turning, the child at the same time being a large one. I replied in almost the very words of the sentence I have above given.

In answer to the Recorder, I also stated that, although it was of course perfectly possible for such an injury to have occurred even had there been no previous violence, in this case I was of opinion that the laceration was not the result of the natural efforts. The reasons I gave for this opinion were—1stly. The woman had previously had natural and easy labours, her twins were born in the absence of both doctor and midwife. 2ndly. She had been perfectly well during this last pregnancy, having made no single complaint of pain prior to the violence received. 3rdly. This last labour was up to a certain period perfectly natural, progressed well; the pains were regular and not at all severe.

In answer to another question of the learned Recorder's, I further stated that I could not say positively how long the child had been dead in utero.

Ramsbotham observes, "I have seldom known a case in which the uterus ruptured where the attendant was not more or less blamed." (Such more or less was my position in this unfortunate case, but I trust to find that the candid opinion of the Profession will endorse as applicable to myself Ramsbotham's concluding words,) "and that, as may be gathered from what I have advanced, most unjustly."

145, Bishopsgate-street Without, March 11.

AT the quarterly meeting of the Royal College of Physicians of Edinburgh, held on Tuesday, the 3rd instant, Dr. Alexander Wood was unanimously re-elected the Representative of the College in the General Council of Medical Education and Registration for a period of five years.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

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GUY'S HOSPITAL.

FOUR CASES OF OVARIOTOMY, THREE OF WHICH WERE SUCCESSFUL.

(Under the care of Mr. THOMAS BRYANT.)

Case 1.—*Multilocular Ovarian Tumour—Ovariotomy—Recovery.*

[Reported by Mr. CHAUNCEY PUZEY.]

LUCY W., aged 17, residing at North Brixton, was sent to Mr. Bryant by Mr. T. O. Duke, of Kennington, under whose care she had been for ovarian dropsy, with the view of some capital operation being performed. She was a remarkably healthy-looking girl, the member of a healthy family, and had had good health till one year previously, when she first experienced pain in her right side, which was aggravated by exercise. A swelling at the part soon made its appearance, which gradually increased, and when coming under observation, her abdomen was as large as that of a woman nine months gone in pregnancy. The catamenia had appeared at the age of 13, and had been quite regular ever since. Her general health was also good. Some swelling of the legs had, however, existed towards night for the last few months.

The girl was admitted into Guy's Hospital, into Mary's Ward, on July 18, 1863, under the care of Dr. Oldham and Mr. Bryant, when a careful examination of the tumour was made. The abdomen was tense and fully distended, measuring thirty-six inches in circumference. The ovarian tumour was apparently polycystic and somewhat solid, fluctuation not being very distinct. A pelvic examination also revealed a complete mobility of the uterus. Under these circumstances the question of operation was discussed, and all things being apparently favourable for extirpation, the risks of the case were fairly laid before the patient and her friends, who readily assented to its removal.

On September 8, at 1.30 p.m., the girl having been moved into a private room, the operation was performed, a few visitors only being admitted; Drs. Oldham and Hicks, with Mr. Cooper Forster, kindly assisting. The patient being under the influence of chloroform, Mr. Bryant commenced the operation by making an incision from the umbilicus downwards to the pubes, of about six inches in length, and on opening the peritoneum some ascitic fluid escaped. The tumour was then tapped, and some thick, gelatinous fluid drawn off; but as the size of the tumour was but little diminished by this step, two or three other cysts were subsequently opened, the contents of which were, however, more limpid. The cyst-wall during this time was firmly held by means of a pair of vulsellum forceps, through which steady traction was applied, the hands of an assistant, placed over the abdominal walls, following up the tumour as it escaped from the abdomen. The cyst readily turned out, no single adhesion being present. The intestines were also well secured from view.

The pedicle was found to be a broad one, and at its base a mass of enlarged veins were visible. To this three whipcord ligatures were applied, but it should be noted to the distal side of the large veins, which were consequently left untouched, and the tumour excised; the wound was then brought together by means of four deep wire sutures, which were passed through the peritoneum, and one through the pedicle; the introduction of several superficial sutures finishing the operation. Ten grains of the compound soap pill were then introduced as a suppository, and the patient placed in bed.

It should be remarked that the hand of the operator in this case scarcely touched the peritoneum, all exploratory examinations for adhesions having been dispensed with.

The tumour when removed weighed sixteen pounds, and, as already stated, was polycystic.

10 p.m.—The patient vomited for the first time since the operation; a second suppository was given to relieve pain which existed, with benefit. Pulse 112. Ice ordered to suck.

9th.—9 a.m.—Vomiting still continues, but between the attacks the patient dozes. Abdomen flat and flaccid, but tender. Pulse 120. Skin hot. 2 p.m.—No vomiting since the last report; otherwise the same. Suppository to be repeated at night. 7 p.m.—The patient is still under the influence of opium, and has had a good sleep; in every respect is most comfortable.

10th.—9 a.m.—Has passed a good night; abdomen unaltered in character; free from pain. Pulse 100, of good power. 2 p.m.—Has taken some arrowroot with relish. The suppository to be repeated at night as usual.

11th.—Going on well; free from all pain.

12th.—Upper two-thirds of the wound has apparently united. Pedicle sloughing. Beef-tea.

14th.—The three superficial sutures removed.

16th.—Two deep sutures at the upper part of the wound removed. Bowels still quiet. Fish for dinner.

19th.—The last suture removed. Ordered mutton chop and wine ℥vi.

20th.—Still doing well. Enema of warm water ordered to relieve the bowels.

23rd.—Bowels freely opened without pain. Wound closing rapidly. Powers good.

27th.—The ligatures have all come away. Wound closing rapidly.

October 10.—The patient is up and about. Wound nearly healed.

November 5.—Convalescent; to leave the Hospital.

Case 2.—*Multilocular Ovarian Tumour—Ovariotomy, and Fatal Result.*

[From notes by Mr. PUZEY.]

Hannah D., a married woman, aged 24, was brought to Mr. Bryant by an old pupil, in August, 1863, with an ovarian dropsy of three years' standing. The tumour had been of slow growth in its early stage, but for some months its increase had been very rapid. In February, 1863, she was tapped for the first time, a second time in May, and again in August, about fifteen quarts of a light-coloured fluid being drawn off at each operation. In the last operation she was admitted into Guy's Hospital, into one of Dr. Hicks' beds. At this time a very careful vaginal examination was made, and although it was evident that some growth existed in the pelvis, there was nothing which positively forbade the idea of the operation of ovariotomy. At this time the patient's friends, however, refused their assent to such a step, and she accordingly left the Hospital. In October she was re-admitted, with her abdomen larger than ever; she was suffering also much pain, and was most anxious to have the tumour removed. A consultation was then held by Drs. Oldham, Hicks, and Mr. Bryant, when it was decided to be but right to give the woman the chance, for it was certain that her life could last only a few months if palliative treatment was alone employed, and there were no very positive indications against the operation.

The patient was consequently moved into a private ward, and on October 8 the operation was performed; the patient being under the influence of chloroform, only a few lookers-on were admitted, together with the necessary assistants.

Mr. Bryant at first made an incision commencing an inch below the umbilicus, and, having divided the peritoneum, an extensive layer of false membrane appeared, completely covering the cyst; it was very thin, like the pia mater membrane, and contained large vessels; it was readily torn through, and the cyst exposed. The tumour was then tapped, and steady traction applied to the cyst wall, precautions being taken to follow up the escape of the tumour from the abdominal cavity by the hands of an assistant placed over the abdominal walls. The cyst was polycystic, and in some parts solid, and it was fixed to the pelvis by an enormous pedicle, the upper part of the uterus and the whole broad ligament being involved. The pedicle was tied by seven thick whipcord ligatures, and the tumour excised. A second tumour was also found in the right broad ligament, firmly connected with the uterus, about the size of an orange; this, however, was left untouched. The wound was brought together by means of three deep and three superficial wire sutures, and the patient placed in bed. An opium suppository was then administered. The patient readily rallied after the operation, but at 7 p.m. she complained of much pain and great thirst; she was troubled also with great flatulence. 10 p.m.—The patient was suddenly seized with faintness; hands and face became cold and pallid; pulse 120, feeble. There was no oozing, however, from the wound. Dr. Hicks saw her, and ordered a small dose of brandy to be given. 12 p.m.—The symptoms are much the same; there is now considerable jactitation of the limbs, and the patient complains of dimness of sight. The stomach rejects everything, even ice. From this hour she rapidly sank, dying twenty-three hours after the operation.

After death the wound was opened, and about one pint of blood was found in the pelvis. The ligatures on the pedicle were quite firm, and it was probable that the hæmorrhage had therefore come from one of the vessels in the false membrane which covered the cyst. Evidence of acute peritonitis also existed. It was then seen that the tumour in the right broad ligament could not have been removed without the uterus.

Case 3.—*Multilocular Ovarian Tumour—Ovariotomy—Recovery.*

[Reported by Mr. Butcher.]

H. B., aged 34, was admitted into Guy's Hospital on September 23, 1863, under the care of Dr. Oldham and Mr. Bryant, having been sent up from Dartford, in Kent, by Dr. Martin, her Medical attendant.

She was a married woman, but she had not had any children, although she had been the subject of three miscarriages. Her general health had been tolerably good, but her aspect was not that of a healthy woman. The catamenia had been most irregular.

She had been the subject of ovarian disease for one year, having accidentally discovered a swelling in her right side at that time, which was accompanied with pain. The tumour gradually grew, till in June last she measured twenty-nine inches round the abdomen; the cyst was also very tense. She was then tapped by Dr. Martin, who drew off six quarts of a dark-coloured and thick fluid. This, however, rapidly recollected, and on her admission she was as large as ever.

A careful examination of the abdomen revealed a multilocular ovarian tumour with apparently much solid matter. It was very tense, and was the cause of much pain. A vaginal examination also proved that the uterus was quite free.

The advantages and risks of the operation of ovariotomy having been laid before the patient, her assent was gained for its performance, and on October 8, 1863, it was carried out. She was removed into a private room, and, as in Mr. Bryant's other cases, but few visitors were admitted, care being taken that all who were present were free from any deleterious influence. Chloroform was given, and an incision about six inches in length made from the umbilicus downwards. On opening the abdomen some ascitic fluid escaped; the cyst was then tapped, and some few adhesions which existed in front were readily broken down; a second cyst also required to be opened to lessen the tumour's size; with a good pair of claw forceps the tumour was seized, and steady traction made upon it, when it readily escaped from the abdominal cavity; Dr. Hicks carefully following up the evulsion of the cyst with his hands placed over the abdomen. Some of the intestines, however, protruded, but they were at once returned.

The pedicle was a broad one, requiring three good whipcord ligatures to secure it; when this was done the tumour was excised. The edges of the wound were then brought together with wire sutures, the peritoneum being included, and the woman placed in bed, ten grains of the compound soap pill being passed as a suppository.

The patient dozed comfortably after the operation, and at 6 p.m., four hours after, she was quite comfortable, and free from pain. At 10 p.m. she was still dozing. Abdomen flaccid; pulse 90.

9th.—Is as comfortable as possible. Abdomen flat and soft, free from all pain. Pulse 96; tongue natural; skin moist; expression cheerful. Has taken some arrowroot with appetite. Repeat the suppository.

10th.—Has had two hours' sleep; doing as well as possible; wound healthy.

11th.—Is most comfortable; nothing to note.

12th.—Several of the superficial sutures removed, the wound having united. Towards evening a little flatulence appeared, which was relieved by a dose of bicarbonate of potash.

14th.—Going on most favourably. Ordered chicken for dinner, and wine ℥iv.

15th.—Has passed some flatus downwards with great relief.

16th.—Wound granulating rapidly; wine ℥vi.

19th.—Bowels freely opened naturally without pain; doing well.

21.—All the deep sutures removed; wound perfectly united, except over pedicle.

November 3.—The wound is nearly well; the granulating stump of the pedicle alone remaining. The catamenia have appeared to-day without pain.

8th.—May be considered convalescent, although the pedicle has not quite healed over.

Case 4.—*Multilocular Ovarian Tumour—Ovariotomy—Recovery*

[Reported by Mr. Butcher.]

Ann J., a single woman, aged 37, was sent to Mr. Bryant by Mr. Cockell, of Dalston, as a fit subject for ovariotomy. She was a native of Tewkesbury, in Gloucestershire, and a schoolmistress. She had always had good health, but had never been regular, the catamenia having appeared but once since March.

She was admitted into Guy's Hospital on September 25, 1863, under the care of Dr. Oldham and Mr. Bryant. One year previously she first observed her abdomen to be somewhat larger than natural, and this enlargement gradually increased; for the last three months the increase had been very rapid. When admitted, her abdomen was tense and distended with a tumour, which was evidently multilocular. The uterus was also quite free. Her general health was good, although her powers were not strong. Tonics were given.

The subject of the removal of the tumour was then discussed, and its dangers explained to the patient, who, however, expressed a wish for its performance.

On October 16, the operation was therefore carried out. The patient was placed in a private room, and precautions taken similar to those adopted in the former cases. The abdomen was opened by an incision six inches long, and a cyst tapped, some thick gelatinous fluid being drawn off. The abdominal opening was then increased about one inch, as the tumour did not readily escape from the abdomen, this small addition readily allowing the cyst to be drawn out. It was well supported during its escape, and the wound rapidly closed by the hands of Dr. Hicks, the intestines being thus kept from view. The pedicle was a narrow one and tolerably long. The clamp was therefore applied, and the tumour removed. The edges of the wound, with the peritoneum, were then brought together by wire sutures, deep and superficial, and water dressing applied. The patient was then placed in bed, and a suppository of the compound soap pill administered. Some slight vomiting followed the operation, but this soon ceased. 10 p.m.—Had slept one hour. Abdomen flaccid, although the patient felt a little flatus. Pulse 100. Skin and tongue moist. Urine to be drawn off at regular intervals.

17th.—4 a.m.—Has slept for nearly two hours, and awoke free from all pain, a fresh suppository having been given at 2 o'clock. 4 p.m.—Has slept again, and is still quite comfortable. Pulse 90. Good power. Suppository to be repeated.

18th.—Slept at intervals all night; is as comfortable as one could wish. The slough beyond the clamp excised. Beef-tea ordered.

19th.—The clamp was removed this morning. Wound looking well. Countenance free from all anxiety. Wine ℥vi.

22nd.—The upper part of the wound has healed. Pedicle granulating.

26th.—Progressing most favourably. Chicken for dinner and wine. Bowels rather uncomfortable. Enema of warm water given, with great relief.

29th. –Pedicle granulating rapidly.

November 5.—Convalescent; wound having nearly closed.

ST. GEORGE'S HOSPITAL.

COLLOID DISEASE OF THE RIGHT OVARY OF EIGHT MONTHS' DURATION—OVARIOTOMY—DEATH.

(Under the care of Mr. HOLMES.)

Louisa B., aged 32, married seven years, no children. In January last she first began to notice swelling of the abdomen, on account of which she applied at the Hospital. With the exception of this swelling she has always enjoyed good health. The catamenia have ceased since June last, up to which time they were regular. Since the commencement of the disease she has lost flesh rapidly, and when she came to the Hospital she was beginning to suffer from difficulty of breathing and distension of the belly, causing inconvenience in walking or standing.

The right side of the belly was greatly enlarged, about as much as at the full period of pregnancy; and the veins were much distended. The left side was not so much enlarged, and the course of the colon could there be distinctly traced. Fluctuation was very distinct over the whole mass. Near the orifice of the vagina a swelling protruded from its posterior wall, hanging out of the vulva, and which proved to be the end of the rectum.

She was originally admitted in July, under Dr. Page; and paracentesis was performed in August by Mr. Tatum, when a pint of clear gelatinous fluid was evacuated. The tumour now began to increase in size, and, as phagedæna was prevalent in the Hospital, she was discharged for a month. She was re-admitted in September, and placed under Mr. Holmes, Mr. Tatum being absent. The patient was extremely urgent to have an operation performed.

The tumour was considered to be ovarian, but from its fixed position extremely adherent. The patient, however, was convinced that her life could not last long in her present state, and preferred running the risk of the operation for removal.

On the 17th, chloroform was administered, and troublesome vomiting ensued, which delayed the operation for a considerable time. An incision was made extending from an inch below the umbilicus nearly to the pubes, and the parts dissected down. It was impossible, however, to distinguish the cyst from the peritoneum, so thin was the former and so closely adherent to the latter. An incision into it was therefore made, and the fluid allowed to escape freely; the adhesions were separated with the finger; and as fresh cysts presented themselves at the wound they were punctured and drawn forwards, and thus the mass was gradually brought to the surface. The peritoneum was filled with the same fluid as the tumour, which must have occurred previous to the operation. The surface of the intestine was covered with a granular-looking material resembling colloid cancer, but which was believed to be the result of the effusion of the cyst matter, altered in form by the movements of the bowel. A long slender stalk attached to the right ovary was treated with a ligature and callipers, and then detached; the wound being sewn up by means of numerous gilt hare-lip pins, with a silver suture or two near the pedicle. During the operation about ten quarts of thin jelly were evacuated, generally transparent and mostly yellow, but in some places resembling cream.

The patient remained in a state of extreme prostration for some time; a suppository of two grains of opium was administered, and an hour afterwards another grain, as the pain was severe. In the evening she rallied, and the pulse was 92. Next day she was tolerably comfortable, after a good night's rest. On the third day she was cheerful and comfortable, but very weak; at two p.m. the pulse was 148. From this time she rapidly sank, and died at half-past three a.m. on Sept. 20, —sixty-two hours after the operation.

The wound had united in its whole extent, except close to the pedicle. The viscera in the abdomen were adherent to one another, but presented no appearances calling for special note.

SHEFFIELD GENERAL INFIRMARY.

CASE OF UNILOCULAR OVARIAN TUMOUR—OVARIOTOMY—DEATH ON THE FOURTH DAY—AUTOPSY.

(Under the care of Mr. W. F. FAVELL.)

[Communicated by Mr. DUNNETT SPANTON.]

SELINA R., aged 32, single, admitted into the Sheffield General Infirmary on June 23, 1863. A cheerful, intelligent woman, of middle height, well formed, with fair complexion. No marks of struma. About five years before, the patient states that she began to feel pain at times in the left iliac region, followed by more or less dysuria. Soon afterwards she noticed a small lump in the same region, which gradually enlarged up to the time of admission. For several months the patient suffered from dyspnœa and palpitation after any exertion, but during the last six months these symptoms, as well as the dysuria, were much more marked. The bowels were constipated, the urine had of late diminished in quantity. Catamenia appeared at the age of 13, always very irregular, sometimes appearing once a fortnight, at other times absent for six weeks.

The operation was from various circumstances postponed until October 22. The patient was then in tolerably good health. The heart and chest sounds healthy. Pulse 66. The abdomen occupied by a uniformly enlarged, everywhere fluctuating tumour, in which no solid matter could be felt, and apparently not adherent to the abdominal walls. Girth at the umbilicus 35 inches. The uterus appeared to be healthy. Tapping had never been performed.

On October 22 the operation was performed in the ward by Mr. Favell, in the presence of the staff and numerous visitors. The room was heated to about 68° F. The patient being placed under the influence of chloroform, Mr. Favell commenced by making an incision nearly four inches in length through the abdominal parietes in the median line. When the sac was exposed it did not appear to be adherent, but on passing his hand over it Mr. Favell found some slight adhesions to the abdominal wall, which were very readily broken down. The tumour was then tapped with a large trocar, and about nine pints of clear glairy fluid drawn off. When the collapsed portion of cyst was withdrawn there seemed to be a large solid mass which would not pass through the wound. Mr. Favell enlarged the incision a little, and the remainder of the tumour was then easily withdrawn. The pedicle, which was short and small, was secured by a clamp and then divided. The tumour was found to consist of one large cyst and a small mass of solid matter. There was very slight hæmorrhage during the operation, and none of the contents of the cyst entered the peritoneal cavity. The wound was secured by two hare-lip pins and silver wire interrupted sutures, which did not include the peritoneum, the pedicle being in the lowermost part of the wound. Over it was placed a pad of lint and flannel bandage. The operation occupied half an hour. At first there was troublesome retching, which came on again immediately after the operation. The patient was drawn up into the bed, and hot bottles were applied to the feet. Pulse very weak and irregular. Respiration 24. Slight retching came on, but no vomiting. As soon as the effects of the chloroform had passed off, a draught containing ten minims of tincture of opium and twenty minims of aromatic spirit of ammonia was given, and ordered to be repeated in an hour if necessary. 4 p.m.—Tolerably comfortable. Complains of slight dragging pain in abdomen. Lies on the side. Skin warm and moist. Pulse 70, moderately full and soft. Was sick twice after taking some brandy, and retching continues. Ordered to have ice and barley-water frequently, and a small quantity of brandy. 9 p.m.—Dozed for half an hour this evening. Slight dragging pain continues. Otherwise quite comfortable. Pulse 84, moderately full, soft. Tongue rather dry. Sick at 6 p.m., not since. About six ounces of urine drawn off by catheter.

23rd.—9 a.m.—Passed a good night, sleeping at intervals; pain in abdomen less severe; face flushed, free from anxiety; pulse 116, sharp, moderately full; tongue furred, rather dry. Sick only once since last report; retching continues. Urine was drawn off. 12 noon.—Countenance rather distressed; pain in abdomen more severe, especially at the epigastrium; pulse 120; respiration 32, short; retching frequent. A suppository containing a grain of opium was administered. 9.30 p.m.—A consultation was held to consider the propriety of removing the clamp so as to relieve the dragging pain complained of, but the pain being less than before, it was decided to leave the clamp on. Pulse 130, moderately full, hard; retching still, but no vomiting; urine drawn off. A suppository containing two grains of opium was administered.

24th.—7.30 a.m.—Slept at intervals during the night. Still much pain in abdomen, and retching, but no vomiting; skin hot, acting freely; countenance flushed, rather anxious; pulse 116, rather hard; respiration 28; urine drawn off by catheter. Mr. Favell removed the clamp, the pedicle remaining in the wound. The patient takes ice and barley-water freely, and a little brandy. 11 a.m.—Wound looks quiet; the upper portion has united by first intention; the pedicle has retracted a little; skin hot and moist; pulse 120, hard, but compressible. 4 p.m.—Pain continues severer; countenance more anxious; pulse 120, smaller; retching continues, but vomiting rarely. 9 p.m.—Has slept a little. Complains of severe abdominal pain, and some tenderness on pressure; slight tympanites; face less flushed, expression anxious; lies on the left side; a very slight movement brings on vomiting; pulse 130, small, softer; urine, drawn off three times to-day, contains a considerable quantity of mucus. The patient takes barley-water and ice, and a little brandy. A liniment containing chloroform and opium was ordered to be kept applied over the abdomen. At midnight, the pain continuing severe, and retching and vomiting very frequent, the patient was ordered to take a draught containing half a minim of Scheele's hydrocyanic acid, and five grains of carbonate of soda in water every hour.

25th.—Much weaker; surface clammy; countenance haggard; pulse 120, weak, and very irregular; respiration slow; retching and vomiting of dark-brown fluid have been almost incessant during the night. The pain was somewhat relieved by the liniment at first, but not afterwards. A mixture of opium and ammonia was ordered, but was rejected immediately; afterwards a chloroform mixture, but without any relief. The patient became gradually weaker, and died at 5 p.m., seventy-seven hours after operation.

Post-mortem Examination, made Eighteen Hours after Death.—Rigor mortis moderate; body moderately well nourished. Commencing at an inch below the umbilicus, and extending along the middle line of the abdomen for four inches, was an incised wound, the upper portion of which was united by first intention, the lowermost portion, in which the pedicle of the tumour had been retained, being in a sloughing condition. On opening the abdomen, the omentum was found adherent along the whole line of the wound, the edges of which were separated, and covered with healthy-looking pus. Inferiorly the omentum was found very firmly adherent to the pedicle of the left ovarian cyst, so that the omentum was quite tense. The pedicle of the tumour was lying free in the pelvis, that portion of it which had been secured in the clamp being sphacelated, its whole length being two inches. The right ovary and uterus were quite healthy. There was a considerable quantity of serous fluid in the cavity of the peritoneum; no blood cots. The intestines full of flatus, very deeply injected, especially the ascending and transverse colon and adjacent portions of the ileum, along which was a thin layer of recent lymph. The chest and head were not examined.

Remarks.—There appeared to be in this case everything favourable for a successful issue; the patient was a tolerably strong and healthy woman; the tumour was of moderate size, and contained little solid matter; there were very slight adhesions to the cyst, and the operation itself was all that could be desired. There was no unnecessary exposure of the bowels, no escape of fluid into the peritoneal cavity, no noteworthy hæmorrhage, and the operation was completed in half-an-hour. It is true the patient was very much exhausted afterwards, but this state was succeeded by one of fair reaction, which seemed to give promise of speedy recovery. There can be no doubt that death resulted from peritonitis and exhaustion, consequent on the incessant sickness. The tense state of the omentum, being firmly attached to the pedicle, and so dragging the stomach constantly, and more especially during any attempts at vomiting, must have caused considerable irritation, and perhaps will sufficiently account for the frequent retching and vomiting, which, it should be remarked, did not arise until some time had elapsed after the operation. It may be that some share of the blame is attributable to the administration of chloroform, but this clearly was not the main cause, or we should have had the sickness progressing in an inverse instead of a direct ratio to the time which elapsed after it was administered. It was thought that the dragging on the uterus, caused by the pedicle being retained in the wound, gave rise to the pain complained of by the patient, but after removal of the clamp and retraction of the pedicle the pain continued, and the sickness became more violent, so that it is evident that the fixed state of the pedicle alone did not give rise to these symptoms. All attempts to allay the sickness were unavailing, and that this was the case may be readily believed if the true cause was, as we suppose, chiefly a mechanical one. It becomes a matter for consideration whether it might not have been advisable—the pedicle being so short—to have used a ligature in place of the clamp, for it seems possible that by so doing the untoward results of the operation in this case might have been avoided.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 14.

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THE FEVER HOSPITAL AND THE PEST-HOUSE FIELD.

To diffuse a clear and intelligible view of the conditions which favour epidemic disease is at present a matter of life and death to our people. Such a view must, as we have lately shown, be a comprehensive one. It must allow for the operation of three sets of causes, in generating, fostering, and spreading epidemic disease. First, local conditions of filth; cesspools, choked sewers, neglected sinks and water-closets, and dark damp crowded habitations, especially if the people be in a low state of health from insufficient food. With agencies such as these at work, we know that somehow or other typhoid, typhus, sore throats, aphthæ, and diarrhœa in the summer, and fatal bronchitis amongst children in the winter are sure to ensue. Here lies the special work of the scavenger, the whitewasher, the builder of model dwellings, and the other well-known and most laudable agents of sanitary reform. Secondly, inasmuch as some diseases, though especially engendered in filth, will yet spread amongst cleanly people by infection or contagion, it is desirable to pick out incipient cases, and set them apart, so as to hinder the mischief from spreading. Here is the use of Hospitals for fever and small-pox, and of special wards in workhouses and other public institutions. Thirdly, there are certain epidemic and atmospheric influences, which are yet little known and understood, connected with meteors, comets, earthquakes, and stinking fogs, such as have been known to usher in the influenza. On these we will not dwell now.

Now, it so happens that in the better parts of London, and in many other places over the kingdom, the first, or sanitary set of operations is beginning to be carried out with tolerable vigour. Cleanliness is felt as valuable for its own sake. Too much has, perhaps, been expected at first, and too little allowance made for the bad habits and ignorance of both rich and poor. Still, we are absolutely certain that the bills of mortality have been reduced, and will be, in proportion as the population are protected from breathing and swallowing putrescent and excrementitious matter.

The great difficulty lies with the second set of measures—viz., the isolation of infectious diseases. Let us picture to ourselves the small chamber, inhabited by the working man, his wife, and children, even in the best part of London; the space of 1600 to 1800 cubic feet which must suffice for sleeping, cooking, and often for washing and drying the clothes. Now, let one of four or five children, inhabiting such a room, be attacked with scarlet fever—it is just like the explosion of a shell in the hold of a ship—there is no escape. Child after child sucks in the contagion, and sickens. Moreover, if any one will take the trouble to go over the "model dwellings" and the "healthy homes," near Broad-street, Golden-square, or in Grosvenor-mews, or such places as Lancashire-court, Bond-street, or the dark purlieus of St. James's around Golden-square, he will be astonished to find how many rooms are occupied by tailors and other makers of wearing apparel, and may perchance see a coat or lady's mantle, which is in preparation for a Regent-street house, lying on a bed where there is a patient ill of small-pox or scarlet-fever. Tailors, dressmakers, washerwomen and schools supply ample means for the spread of any contagion.

The obvious remedy is to weed out the cases of scarlet-fever, as those of small-pox have been weeded out during the past summer, and to have them treated in some place where they shall not spread infection. Such a place is the Fever Hospital, of which we may say truly, that for every patient who is admitted and treated there, at least half-a-dozen other lives are saved, by removing from them a source of infection. In common cases of illness the reception and cure in an Hospital of one patient benefits that one individual; in a case of fever a whole neighbourhood is protected.

Cases of typhus, scarlatina, and small-pox, too, ought not as a rule to be received into general Hospitals. Instances are far too common of the sacrifice of life in such Hospitals by the spread of scarlet-fever and small-pox.

Scarlatina is most especially the enemy that requires to be hunted out at present. Against small-pox we have virtually a preservative in vaccination, except that once in every five or six years the infection attains exceptional virulence. True contagious typhus is most rare at the west end of London. Typhoid is a formidable disease, but we may fairly look to improved drainage and cleanly habits as a preventive; and, besides, should there be a case in a respectable private house, it most rarely spreads. Not so scarlatina. Its infection is almost irresistible; and largely as we believe in the efficacy of "sanitary measures," they are of very uncertain efficacy so long as a sick person remains in a house. The true means of safety is to send the patient away to some place, such as the Fever Hospital, where he shall be treated, without risk of infecting other persons.

It so happens that an endowment,—the Pest-House Field Charity,—destined for the very purpose of granting this boon to four populous parishes in the West of London,—St. Clement Danes; St. Paul, Covent-garden; St. James's; and St. Martin-in-the-Fields (in which is included its offshoot St. George, Hanover-square), is now virtually in operation. A valuable piece of ground at Craven-hill, Bayswater, comprising from Nos. 14 to 22 Craven-hill (inclusive); Craven-mews, from Nos. 6 to 12 inclusive; and Craven-hill-gardens, from Nos. 30 to 42 inclusive; whose present ground rents amount to £400 *per annum*,—a sum which might possibly be increased to £600 or even £1000 per annum, and which, when the leases run out seventy years hence, will, in all probability, bring in £5000, belongs to the parishes in question, as the residue of a charity bequeathed for the reception and relief of the poor if suffering from plague. In a judgment by the Master of the Rolls delivered on March 2, 1863, his Honour said that, "considering that the object of the charity was to provide for a species of contagious disorder, in justice to the founder, to that purpose, it should now again be applied; and as the particular disease for the relief of which it was given does not now exist, it might embrace relief to contagious disorders generally."

His Honour therefore proposed to give the income "to some Hospital conveniently situated that would be willing to make arrangements for taking in indiscriminately contagious or infectious cases, in the event of any outbreak of such disorders in any of these parishes." As his Honour observed, "contagious disorders *are usually at first confined to spots*."

Would that we could impress upon the vestries of these four parishes the full force of this clear-headed lawyer's judgment. Most true is it that these diseases *appear in spots*. If rooted out, there the mischief may cease; if left, the spot spreads by easy means.

Now, instead of expending the proceeds of this charity on its legitimate purpose, to check *occasional outbreaks of contagious disease* in the west of London, it is proposed either to divide the proceeds between the parishes, on the condition that each shall subscribe its *quotum* to some ordinary Hospital, and so have a certain small number of beds at its disposal *for common diseases at all times;* or else that the whole income shall be given to one Hospital, which shall devote a certain proportion of its beds to these parishes respectively. Propositions were made to various Hospitals,—but some exclude all contagious diseases; others charged £20 per bed per annum; but King's College Hospital not only sent in the lowest tender—offering to give beds at £16 13s. 4d. per annum—but also offered to accept all contagious diseases except small-pox.

Here the case stands for the present. If the last scheme is carried out, the means of suppressing contagious disease will be bartered away for a trifling amount of regular hospital accommodation which will merely give a relief to ratepayers, and that not worth mentioning, and King's College Hospital will acquire a sort of vested right to the entire proceeds when the leases shall fall in. Our hope is, that the strong common sense and clear-sightedness of the able judges who will decide the matter will cause the money to be expended according to the original intention, and that it will go to the Fever Hospital for the present.

It is well known that in times of pressure neither the Fever nor the Small-pox Hospital is able to relieve half the number of applicants.

We have derived many of the above facts from a pamphlet circulated by Mr. F. Crane, of 55, Piccadilly, a public-spirited member of the St. James's Vestry. We differ with Mr. Crane as to the best mode of applying these funds, and should be glad to learn that he and his brother vestrymen recognise the paramount necessity for enlarging our present machinery for suppressing contagious disease.

ETIOLOGICAL AND STATISTICAL MISTAKES.

At the close of our comments on Professor Christison's late address we promised to notice some other samples of bad reasoning and unfair inferences from acknowledged facts in relation to sanitary matters. We are about, indeed, to criticise hasty conclusions which we see not uncommonly arrived at by some of the Health Officers in London,—hasty, because their authors have neglected to take into their consideration all the conditions which are necessary to correctness. Dr. Christison, we have before hinted, is not the only one who jumps too rapidly at an inference, although he may be the most distinguished of the offenders at the present moment. Well, then, we will first of all refer to an inference all but invariably drawn by Metropolitan Medical Officers of Health in their several reports as to the healthiness or unhealthiness of certain localities in London from their death-rate, and especially from the deaths of young children that take place in them year by year. It is undoubtedly true that where a high mortality rules, and especially where the mortality is high among infants, there must be something to cause it; but when we look through the reports of these gentlemen, we find a tendency to refer it all to causes which it is in the power of legislation to remove, as if all that is wanted to render London healthy, and to destroy scarlet fever, measles, hooping-cough, and such like diseases, consists in drainage, whitewashing, and improved water supply. All these things are very necessary, but there are other sources of the spread of disease which few of them recognise, and which nothing will remove but increased care on the part of those exposed to them; who must have their ignorance instructed, and their morality elevated; who, if these things are to help them, must be induced and taught also to help themselves. All the house-draining, and cleaning, and ventilation in the world will not prevent a large mortality from summer diarrhœa, for instance, among infants, who are chiefly the subject of it, so long as mothers undertake the responsibility of married life without the most elementary notion as to maternal duties;—so long as children are deprived of their natural food to be half choked with badly-prepared or sour spoon food, put to sleep with the rest of the family in a room closely shut up, out of dread of the night air, and where the consequent sweltering in bed exhausts the powers of life. Many of these deaths, we grieve to say, are anything but undesired on the part of the mother. Nor is it to be expected that public sanitary measures will ever do more than reduce the virulence of such exanthemata as scarlet fever or measles. Every practical Physician knows how impossible it is to trace the source from which the infection of these maladies is derived. Children may catch them at school, where one of the scholars may be sent by a thoughtless mother, either from a house where the disease is existing, or even in an early stage of the malady itself. They may be brought home from an infected house to the residence of a laundress, and from thence transferred to the most respectable families in a district. No public supervision, and almost no private care short of that which would result from a morbid timidity, will bar their progress from family to family; and even as to influencing the fatality of attacks, we are every day more and more impressed with the belief, that while malaria has probably much to do with it, family constitution has more. How often do we see in the best houses and most well-to-do families, situated in the most healthy position, several of the children, perhaps all that are attacked, carried off by scarlet fever, while every case recovers in another less favourable locality among the poor. These are things, then, which public sanitary efforts cannot remedy; it is purely Utopian to look for such results. Nevertheless, it is true that though carefulness will not do everything, it will do much in this respect, since there is evidence enough in the Reports of our Health Officers that maladies reputed infectious, and the zymotic class of maladies, generally prefer for their home the localities occupied by the poor, the ignorant, and the careless.

And this brings us to say something about the practice of taking the death-rate of infants as a measure of local healthiness, or the reverse. We will show what we mean by a quotation from the last "Annual Report" of Dr. Thomson, the Medical Officer of Health for Marylebone. Referring to his district mortality, he writes:—"In All Souls, 61 children die to 1000 living; in Cavendish-square district, 42 per 1000; Rectory, 79 per 1000; St. Mary, 66 per 1000; Christchurch, 79 per 1000; St. John, 54 per 1000. *The most healthy districts for children are, therefore, Cavendish-square and St. John, while the most unhealthy are the Rectory and Christchurch.*" (The italics are ours.) Here are two errors. In the first place, Dr. Thomson calculates the death-rate of children, not upon the child population of these districts, but upon the total population at all ages. The correct death-rates would not be those given, but the following as per 1000:—Cavendish-square, 62; St. John, 71; Christchurch, 74; All Souls, 77; St. Mary, 86; Rectory, 104. But his second error is still more serious. Does it follow that because the child death-rate in the two first districts in the above list is the lowest, that *therefore* they are the most healthy for children; and because the child death-rate is so much higher in the two last, that *therefore* they are the most unhealthy? The truth is, that Dr. Thomson, in common with many others, altogether neglects to take into account the class of persons and rank in life of those whose children furnish the deaths referred to. It is difficult to over-estimate the importance of this element of a correct conclusion. Among the reports which lie on our table there are two which dwell emphatically upon this source of fallacy. In the Report, by the Medical Officers of Health, of the health of the parish of St. George's, Hanover-square, for the quarter ending March 28, 1863, these gentlemen divide their district into two classes of streets. Into the first class they place the aristocratic and first-class business streets and squares, where they find that the general death-rate is 10 per 1000 of population, and that out of 201 deaths only one-fifth were of children under five years of age. Into the second class they put the remaining streets, where the death-rate of those who died *at home* is 19·8 per 1000, and where, out of 258 deaths, nearly one-half were children under five years of age. And to show the influence of *class* and rank more forcibly they supply us, in two tables, with the mortality in five squares on the one hand, and that in seven of the streets occupied by the lower classes of the population on the other. The squares are Belgrave-square, Eaton-square, Chester-square, Eccleston-square, and Warwick-square; and the streets are Upper Ebury-street, Pulford-street, New Grosvenor-place, Brewer-street, Glasgow-terrace, Robert-street, and Eaton-court. We may represent the result of the analysis as follows:—

	1862.		1863.	
	Deaths under 5 Years.	Deaths over 5 Years.	Deaths under 5 Years.	Deaths over 5 Years.
Total mortality in the 5 squares	2	17	—	16
" " " 7 streets	82	36	37	26

The proportion of deaths over and under 5 years in these two classes of the population are here completely reversed.

In two of his annual reports on the health of Islington, Dr. Ballard has entered into a similar investigation. In his report for 1858 he contrasts the mortality as it occurred during three years in 109 streets, etc., occupied by the wealthier part of his population, with that which occurred in 150 streets occupied by the labouring class, as follows:—

	Total Deaths.	From Zymotic Disease.	Per Cent. of all Deaths.	From Tuberculous Disease.	Per Cent. of all Deaths.	Under 5 Years of Age.	Per Cent. of all Deaths.
Class 1	734	133	18·1	107	14·5	216	29·4
Class 2	2237	687	30·7	333	14·8	1333	59·8

In his report for 1861 he takes advantage of the recent census to divide his parish into thirty-five small districts (of which he has been able to ascertain the population), apportioning the streets to them, as far as possible, according to the class of people occupying them, and gives the result of this subdivision in several important tables. The thirty-five little districts are in these tables thrown into three groups,—the first embrace the more wealthy districts; the second, those with a more mixed population; and the third, those with a population more or less poor and negligent. We cannot refrain from presenting an abstract of these tables, which we do in the following form. Although not exhibiting all that is desirable, the method adopted is a step in the right direction.

	Group 1.	Group 2.	Group 3.
Mean number of adults constantly ill, as calculated by Mr. Edmond's law	1092	1616	1109
Proportion of families to 1 sick adult	8·4	8·7	10·6
Proportion of families to each death of a child under 5 years of age .	36·3	29·2	19·3
Proportion of families to each death from a zymotic disease . .	53·0	47·0	36·2
Proportion of families to each death of a child under 5 years of age, as calculated on the mean of three years, 1860—2. (Report for 1862)	38·2	29·9	19·6

From which it appears that, while there are more adults sick and dying in the district occupied by the wealthy than in those occupied by the poor, the families in the latter districts which lose their children are more numerous, as also those which lose members from the zymotic class of diseases. An explanation of the high figure to which the deaths of children in the poorer parts of the parish rises, as well as that to which the sickness and death among adults in the wealthier districts rises, he finds in the different proportion that exists among the ages of these two classes of his population. We quote his words:—"It requires no elaborate statistical enumeration to assure us of the notorious fact that in the districts of the first group, occupied by the most well-to-do, the proportion of adult persons in a family, including servants, unmarried sons and daughters, and other dependants, together with the number of persons at an advanced age, is considerably larger than in the third group, whose marriages are commonly contracted earlier in life, and, as some would say, less prudently, where the head of the family has as much as he can do barely to support his wife and children, and where the elderly members of families too often have to take refuge in the Workhouse." Again,—"I have instituted a limited inquiry as to the proportion of children under five years in several streets occupied by the labouring classes, and I find them to amount to about 20 per cent. of the entire population of those streets, that is, out of a population of 4759 there were 981 children under 5 years of age. At the census of 1851 the children under five years of age formed about 12 per cent. of the entire population of the parish." And then he goes on to say (after showing that in 1861, 9 per 1000 of the whole population died under 5 years of age)—"In these same streets 83 children died during the year under 5 years of age, being about 17 per 1000 of the whole population, and 84 per 1000 of the population under 5 years. In some of the streets entering into this enumeration the mortality was much higher than I have stated. Thus in Nelson-place, Nelson-buildings, and Nelson-cottages, City-road, it was at the rate of 187 per 1000; in Halton-place, 161 per 1000; in New Hall-street, 140 per 1000; in Albany-place, 173 per 1000; in Bemerton-street, 106 per 1000; in Clayton-street, 112 per 1000 of those living under 5 years of age." Here, at any rate, is something on which we may rely; the comparison is instituted between streets occupied by persons of the same class in life. In the streets, then, where the mortality was so much above the average for the class, some other causes must have been in operation beside those which influenced the class as a whole; but even Dr. Ballard does not presume to say that these causes were such as the local government could remove by the application of such remedies as they are intrusted with for the furtherance of cleanliness and decency. What we would indicate, then, as the lesson we wish to teach to all engaged in searching out the causes of disease by the statistical method, is embraced in the one word—Caution.

THE WEEK.

THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH AND MR. ROBERT JACOB JORDAN.

We understand that at an extraordinary meeting of the Royal College of Physicians of Edinburgh, called to consider the conduct of Mr. Robert Jacob Jordan, a Licentiate of that body, to which meeting Mr. Jordan was duly summoned, the following motion was moved, seconded, and unanimously agreed to:—

> "It having been proved to the satisfaction of the College that Robert Jacob Jordan, a Licentiate of the College, has been guilty of conduct unbecoming the character of a Physician in publishing, or causing to be published, an indecent work, entitled 'The Illustrated and Descriptive Catalogue of the Subjects contained in the London Anatomical Museum,' to which is annexed the 'Guide to Masculine Vigour,' by a Physician, the said Robert Jacob Jordan be deprived of his licence from the College."

The clerk was further requested to take the requisite steps to have the qualification which appears after the name of Jordan in the Medical Register erased. As the only other qualification possessed by Mr. Jordan was that derived from the Royal College of Surgeons of England, which was erased by order of the Medical Council at their last meeting, Mr. Jordan's name will now be expunged altogether from the Medical Register.

DR. MOORE AND THE BETHNAL-GREEN GUARDIANS.

Dr. Moore, the District Medical Officer who lately did public service by obtaining an inquest on the body of the child who died at 10, Hollybush-place, Bethnal-green, and by calling the attention of the authorities to the shameful sanitary condition of the district, has been visited with the wrath of the Board of Guardians. They have asked the Poor-law Board to sanction his dismissal. The Board very properly require the particulars of the charges on which this request is grounded, and the guardians are now hard at work collecting evidence. We need scarcely say that under these circumstances it may be expected that every bit of doubtful tittle-tattle and spiteful gossip which may be supposed to tell against Dr. Moore will be carefully raked together. There is certain to be a crowd of parasitical wretches who will be only too glad to curry favour with the potentates of Bumbledom by maligning the Medical officer. We know nothing personally of Dr. Moore, and are merely expressing an opinion based on the newspaper reports. A Mrs. Norton, a midwife, comes forward to say that she has been in the habit of representing Dr. Moore at the confinements of patients, for which he was paid by the parochial authorities; and that in two instances Dr. Moore gave her only four shillings instead of five, the latter being the sum which she had been accustomed to receive. "*She would not have complained if he had paid her the full amount.*" This respectable witness received the thanks of the Board of Guardians; "they were very much obliged to her for coming forward to give information." The strong *animus* against Dr. Moore which is perceptible throughout the whole of these proceedings will, we should hope, render the Poor-law Board doubly careful to sift the evidence. We trust that Dr. Moore will be able triumphantly to refute the charges made against him.

THE RECENT MURDERS AND SUICIDE.

The general details of the dreadful triple murder and suicide which have roused such universal feelings of horror and indignation are so well known, that we may well spare ourselves and our readers a repetition of the ghastly tale. Its Medico-legal aspect, however, presents some points of scientific interest which cannot be passed over. There is no doubt that prussic acid or cyanide of potassium was the agent which deprived the unfortunate mother and her children of life. Mr. Kiallmark, the Surgeon who saw the bodies when the cab stopped at the Royal Oak, deposed that on looking into the cab

> "The first thing that struck him was a very strong smell of prussic acid. He saw the body of a child lying on the front seat of the cab, and a woman and another child huddled together at the bottom. On examining the bodies he found them all to be dead, the youngest child being nearly cold, the others still warm. There was no pulse or any sign of life whatever, and the bodies were quite flaccid. The child that lay at the bottom of the cab had vomited.
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> "Mr. Coombs, one of the House-Surgeons who received the bodies at St. Mary's Hospital, said that they all smelt of prussic acid; the smell, however, was more particularly strong in the case of the mother and the younger child. The bodies were quite flaccid, and the fluid which exuded from the woman's mouth smelt very strongly of prussic acid and porter. The eyes of all three presented the ordinary appearance. On again examining the bodies at daylight, he found a slight bruise on the arm of the mother and one of the children. There was also a sore on the mother's foot, upon which was a portion of ointment, evidently taken from a box found on her person. Mr. Coombs then described the appearances presented at the post-mortem examination. In all three cases the brains were congested and smelt of prussic acid. In the case of the woman half-an-ounce of fluid was found in the pericardium. In all three the right auricles of the heart were distended, the right ventricles flaccid, the left auricles and ventricles being empty. The other organs were healthy. The stomachs were tied up, sealed, and delivered to Dr. Matthiessen for the analysis of their contents. The woman bore marks of having borne

children. There was no wedding-ring on her finger, but a distinct mark of one. From the likeness between the woman and the children he should say they were mother and daughters."

The idea that the unfortunate woman herself took the poison and administered it to her children is almost conclusively negatived by the fact that no phial was found in the cab. It is in the highest degree improbable that after swallowing a large dose of prussic acid she should have retained sufficient self-possession to get rid of the bottle by throwing it out of the cab window, to say nothing of the chance of the action being observed. The far more probable conclusion is that the poison was administered in the porter, and this view is confirmed by the behaviour of the husband, his direction to the cabman to drive to a distant part of the town, and his subsequent suicide. The poison, whether prussic acid or cyanide of potassium, must have been swallowed in some vehicle, and, as far as is known, it could only have been given in the porter. That the poison should have been introduced without attracting the attention of the bystanders, and taken unresistingly by the victims, are no doubt remarkable circumstances, but they do not come within the range of the impossible; the murderer, by draining the pewter pot on the pavement before he returned it, added another link to the chain of presumptive evidence against him. It is now asserted by the sister of the deceased woman that a month previously Hunt had made an unsuccessful attempt to poison his wife. Cyanide of potassium is suggested by a consideration of the greater ease with which a solid mass might have been dropped unseen into the porter than a fluid decanted from a phial.

The agent by which Hunt terminated his life is supposed to have been tincture of aconite, for a bottle containing about a couple of drops of this poison was found in his bedroom. The symptoms he exhibited, so far as they have been made known, are in accordance with this supposition. Vomiting is always a prominent symptom of poisoning with the preparations of aconite, and in several cases on record the mental faculties have been retained to the last. Before his death Hunt said that his wife had died by prussic acid, and that he believed he had taken aconite, but as several of the other statements he made are known to be false no weight can be attributed to his assertions. There is no truth in the statement that Hunt had a laboratory in his house; a few bottles containing medicines were found there, but they were not of a poisonous character. Aconite is not easily detected by chemical tests; the administration of a spirituous extract of the contents of the stomach and vomited matters to small animals might give the toxicological confirmation required.

FROM ABROAD — THE CONTINENTAL MEDICAL ASSOCIATION— CONGRESS OF ARMY SURGEONS AT GENEVA—HEREDITARY PALMIDACTYLISM—EPIDEMIC JAUNDICE IN PUERPERAL WOMEN.

THE meetings of the various Medical Associations on the Continent continue to take place, and form admirable mediums for the exposition of the wants and aspirations of the Profession in regions in which power of the expression of opinion is so limited. The fifth annual meeting of the French General Medical Association has just passed off with great *éclat*, under the presidency of M. Rayer, and the co-operation of its ever-active secretary, M. Amedée Latour. There are now 90 provincial societies affiliated to it, and the members have increased in numbers from 1577 in 1859, to 5746 in 1863. Its main operation is that of a Medical Benevolent Society for the relief of distress among its members or their relatives, and to this end it has 275,000 francs at its disposal, all demands for succour of the past year having been complied with, and the expenses covered. At the present meeting the creation of several life-pensions has been determined on. Both the various local societies, as well as this general assembly, also discuss matters of Professional interest. The promoters of the movement, however, have to regret that sixteen departments are still unrepresented in the Association, and more than three-fourths of the Profession have not joined it. The German Association of Naturalists and Physicians has held a successful meeting (the 38th) at Stettin, not unaccompanied, however, by the manifestation of irritability of temper. This chiefly appeared on the occasion of the choice of the place of meeting for next year, and as no town had sent an invitation some difficulty and great difference of opinion occurred. Giessen was at last determined upon at the instigation of Professor Virchow, who urged its selection in terms of somewhat indiscreet violence. However, the learned Professor was popular enough, for on his rising to deliver his address on the "Asserted Materialism of Naturalists" he was received with such a torrent of reiterated applause, that one of the grave auditors demanded whether they were in a play-house? As to the ladies, they were, indeed, enchanted with the Professor, and to such a pitch was this carried that after he had been toasted, one of them ran to him, embraced, and kissed him! If there was thus a comic side to the assembly, so was there also a tragic one. At the commencement of one of the banquets a distinguished Surgeon suddenly arose, and in the most excited manner declared that two of his friends had not been supplied with wine. This was shown to be incorrect, and during the general confusion which the occurrence gave rise to the unfortunate man withdrew, and after visiting his lodgings and tearing up letters into innumerable fragments, went and drowned himself. Again, Professor Baerensprung, the distinguished head of the venereal department at the Charité Hospital, Berlin, was expected at this meeting; but the sad news arrived that while on a tour he had been seized with raving madness, and was now placed in a lunatic asylum with very slight hopes of recovery. Finally, a member, passing over a plank from a steamboat which had just returned from an excursion, fell into the water and was drowned. At one of the most crowded meetings, numbering above 2000 persons, it was announced that a society is being organised at Vienna for the purpose of starting from Trieste next March, in a fine screw-steamer with a competent commander, in order to make a voyage round the world. The charge is fixed at 5000 florins each person, 1000 to be paid at once, every expense, whether on the ship or at any port she may call at being included. Should any of our readers feel disposed to join this monster excursion, they must apply to Herr Schweitzer, at the Ministry for Foreign Affairs, Vienna. Altogether this meeting passed off very satisfactorily. The reception of the guests by the inhabitants and authorities of the town was enthusiastic and hospitable; and the work got through at the sections during the week's sittings is represented to have been abundant and important, so that beginning early in the morning, the industrious *savants* could hardly be got to their *table d'hôtes* even at (for Germany) the late hour of half-past two. At the same time that this congress was sitting at Stettin, the ninth meeting of Hungarian Naturalists and Physicians was being held at Pesth, the two bodies, indeed, mutually toasting each other by telegram. Although this meeting will probably prove far less fertile in scientific results than that held at Stettin, yet it possessed a more imposing interest in the fact of its being the first meeting held in Hungary since the year 1847. Old friends and colleagues, pupils and professors met again with joy after the long separation induced by the disturbances and disasters incident to troublous political times. It is, indeed, of good augury that the followers of science deem the aspect of affairs sufficiently auspicious to enable them to resume their peaceful and profitable investigations in common. Several hundred members attended, but the city of Pesth and its inhabitants gave them but a cold reception, indeed, entirely ignored their presence.

Another interesting and philanthropic international congress has been just held at Geneva, under the auspices of the Society of Public Utility. Moved by the representations of MM. Dunant and Appia, two Swiss Surgeons, who had witnessed the horrors of the battle-fields of Solferino and Magenta, and deplored the absence of sufficient Medical aid, this body has called a meeting of delegates from all the important states of Europe in order to consult together with respect to better provisions for the future. The invitation has been cordially responded to, official representatives attending from all the Governments—Lord de Grey and Ripon having despatched Inspector-General Rutherford on the part of Great Britain. The deliberations were continued over four days, some of the propositions giving rise to very animated discussions. The resolutions were at last carried nearly unanimously, and are to be submitted to the respective Governments as *desiderata*. It is proposed by them to form in each country a standing committee of civilians, the object of which should be, in time of war, to offer every possible assistance to the military authorities in the way of Medical attendance and nursing. In time of peace these committees will turn their attention to organising the various succours and the instruction of volunteer nurses. All expenses incurred by the volunteer nurses, male or female, to be paid by themselves or by the committees. These volunteers in all countries are to wear a white badge with a red cross on the arm as a mark of their office and a symbol of fraternal unity. The committees are to have international meetings for the purpose of interchanging information and concerting their measures. Not only should all ambulances, hospitals, Surgeons, and attendants be declared neutral, but also the wounded themselves, and the inhabitants of the country who render them assistance; and an identical flag should be adopted by all countries for the ambulances and hospitals. Of course, these are at present mere general propositions; but in these times of present war and wars soon to come, who can doubt of the benefit which must accrue from interchange of opinion among those whose mission is the mitigation of the horrors resulting from deadly strife?

M. Berigny related an interesting case of *hereditary palmidactylism* to the Academy of Sciences. The third and fourth toes of the right foot of a woman were joined together throughout their entire extent, the hands and feet of her husband exhibiting nothing abnormal. She had seven children, none of whom presented their mother's deformity. In the third generation, however, one of her daughters had, among other children, a girl who exhibited a palmated condition of the medius and ring-fingers, just like the toes of her grandmother. Another sister also had, among her other children, a boy and a girl both with the medius and ring-fingers palmated. Of three brothers of the two above-named sisters one had, among five male children, his eldest with fingers exactly like those of his cousins—making altogether four children in the third generation who inherited the abnormal digitation of their maternal grandmother. In the fourth generation one of the grandchildren, the eldest of the boys with the palmated fingers, became the father of female twins, one of which had her toes united exactly like those of her great-grandmother, and of a boy who presented the same peculiarity of the fingers as did his father. The case is further remarkable, inasmuch as the anomaly was always witnessed in the eldest children, and always on the right side.

M. Bardinet, of Limoges, read a memoir before the Academy of Medicine upon an epidemic of jaundice, as it had affected puerperal women in that city. His memoir is based on twenty-five cases, three of which proved fatal. He has found it assuming three degrees: the *simple* or *benign*, which in nowise interferes with the progress of the pregnancy, this going on to its full term; the *abortive*, in which it is severe enough to determine abortion or premature labour, but leads to no further ill effect; and the *malignant*, in which the death of both mother and infant is rapidly produced. This epidemic prevailed extensively amidst the population of Limoges, but, with the exception of pregnant women, it proved in all a very mild affection.

PROVINCIAL CORRESPONDENCE.

IRELAND.

DUBLIN, November 4.

IN endeavouring to give a very brief sketch of the proceedings connected with the opening of the Dublin Medical Session of 1863-64, I shall, as far as possible, observe a chronological order. One of the first events, which, however, belonged rather to the past session, was the distribution, by the Lord Chancellor of Ireland, of the Cusack medals, the prizes, and honorary certificates awarded, in Steevens' Hospital and Medical College, at the close of the session 1862-63. The Cusack commemoration medals are some in silver, others in bronze. On one side is an admirable likeness of the late Dr. Cusack, the fidelity of which is the more remarkable as the eminent artist, Mr. Wyon, of the Royal Mint, by whom the die was executed, had never seen the distinguished Surgeon whose features it was his lot to stereotype for posterity; on the obverse is a view of Steevens' Hospital. The following are the names of the successful candidates:—

Cusack Medals and Exhibitions.—Senior—Robert L. Swan, Kilkenny. Middle—John Campbell, Newtownlimavady. Junior—Robert A. Caldwell, Newtownlimavady. Surgical Clinical Prize—Mr. R. L. Swan. Midwifery Assistants—Mr. Theobald A. Purcell and Mr. Richard Robinson.

Certificates of General Attention and Proficiency at Terminal Examinations.—Richard M. Craig, Lewis Eades, Robert V. Fletcher, William A. Forbes, Michael Fox, E. Higginbotham, Thomas Hoskins, Ambrose Kelly, Joseph M'Donnell, Andrew M'Master, Charles H. Parkes, Richard Pendleton, Rawdon Robinson, Richard Robinson, Edward T. Thomas, Charles Thorp.

At the Meath Hospital the session was opened by Mr. Smyly, the senior Surgeon, with an excellent address, directed chiefly to the younger members of his audience, and full of valuable advice for their guidance as students and as practitioners.

The Ledwich School of Medicine was opened by Dr. Wharton. His observations were also addressed principally to the junior students, bringing before them the objects and duties of the Profession on which they had entered, as well as the necessity which existed for each and every one of them availing themselves zealously and earnestly of the great advantages placed within their reach. He dwelt with much force on the advisability of their learning everything that bore on their Profession, as knowledge of that kind was like the links in a chain, any one of which being weak or wanting would render the entire imperfect. He strongly admonished them, above all things, to strive to acquire a well-grounded general knowledge of their Profession, and to have no specialties. By a series of familiar illustrations, admirably put, he showed that the whole superstructure of true Medical knowledge depended not on intimate acquaintance with any peculiar branch or branches, but with all. He showed most clearly how anatomy, osteology, physiology, chemistry, and other sections of natural philosophy were most intimately connected, and that the knowledge of each was indispensably necessary to the Surgeon and Physician.

Dr. Jacob as usual inaugurated the session at the College of Surgeons, the President, Dr. Colles, occupying the chair. In his opening observations he alluded in feeling terms to the loss the College had recently sustained in the death of the late Professor of Surgery, Dr. John Hatch Power, "a Physician of high talents, a friend ever faithful, a teacher always careful and painstaking, an honest man." Dr. Jacob next proceeded to remark upon the recommendations of the General Council of Medical Education. He strongly advocated the necessity of a sound preliminary education, observing that the College would not consider that any student had commenced his Medical studies until he had shown proof of sound elementary education, by passing an examination in classics, science, and modern languages. It had been suggested to the College that the examinations should be as practical as possible. On the importance of this point the learned Professor laid great stress, observing that the students would best attain their objects by acquiring a thorough knowledge of anatomy and by strict attention to Hospital practice.

The Winter Session was opened at the House of Industry

Hospitals (the Richmond, Hardwicke, and Whitworth), on Tuesday, the 3rd inst., by Dr. Corrigan, President of the College of Physicians. His able and useful lecture was also directed to the junior students, and was calculated to impress upon them the necessity of early cultivating habits of accurate observation. Some of his remarks upon this subject are so pertinent that I shall make no apology for quoting them *in extenso*:—

"It is sometimes a useful practice," said Dr. Corrigan, "with an introductory lecturer as with a popular preacher, to point to the paramount evil or folly of the day. I believe one of the greatest evils of the day in regard to students in medicine is 'grinding.' My non-professional friends may perhaps desire to know what 'grinding' is. I think it may be defined to be 'the art of substituting a knowledge of words for a knowledge of things.' I must say, however, it is an evil for which students are not to blame. The cause originates with our nineteen Medical corporations. Left by the Legislature to make their own laws, and engaged in competition with one another for the profit derived from the sale of diplomas, each is afraid to institute a truly searching examination, lest, demanding more than another, students should go for their diplomas where the examination was easier and lower. This is, however, not the place to pursue this subject further. I shall do no more here than point out the evil, trusting to your own good sense to avoid that against which those in higher places ought to guard you. 'Grinding' may be exemplified by what some of us remember of the way in which we were taught geography long ago in our school days. We were held up as wonderfully well-educated children, when, in reply to a question, 'What are the principal rivers of Europe?' we were able to roll out so rapidly, that a listener could hardly say in what language, a long list of names of rivers, of the size, nature, and relations of which we knew nothing, and which names were even rapidly fading from our memory. Such is the principle now acted upon too generally in learning medicine. It is much easier and more pleasant to prepare for an examination by sitting two hours every night round a fire, and committing questions and answers to memory, than to rise early each wintry morning and spend the same number of hours in the wards and post-mortem rooms of an Hospital. But is the information acquired the same? Indeed it is not; and you will find, perhaps, when it is too late to retrieve the error, that in learning words you have learned almost nothing, and what little you have learned will fade rapidly from memory, for it has not been fixed in your mind by the impress of observation, and observation is to the mind what the seal is to the wax. It is observation that fixes the fact in the mind, never to fade, just as the seal leaves its mark indelibly on the wax. A saying of Bichat's should never be forgotten in addressing students—'Why do you go to books for descriptions of diseases when you have the originals in the wards before you?' Let me not be misunderstood in any observations I make in supposing that I object to teaching by examination, or 'grinding,' if we may still call it so. On the contrary, it is most useful at a certain stage of the student's progress, for it gives him a promptness in arranging his ideas and giving expression to them in appropriate language. Grinding or private examination is in this way most useful when the student has amassed in his mind a large stock of facts and observations. It enables him to acquire the power of readily eliciting what he wants. The student has the facts, as a person going to travel may have all the various articles he expects to stand in need of, but ill-arranged and huddled together. The private examiner, or grinder, by calling on him unexpectedly to answer this or that question, trains him into a habit of being able to bring forth at once the information he is asked for or requires in his professional life, just as the traveller in his well-arranged pack can at once find what he wants. In this way the advanced student is much benefited by a short period of grinding or private examination; but to begin with, and make it a substitute for observation, is destruction."

Dr. Corrigan next proceeded to make some remarks upon the importance of "case-taking," and upon the practical nature of the science of Medicine. He then, in alluding to the charge often brought against the Profession of an unwillingness to try new remedies, instead of which, in his opinion, there was often too great a propensity to run into novelties, he continued:—"Do those who urge us to accede to every new nonsense that is called a theory, and to try every new folly in practice, understand what it is they ask us to do, or on what they require us to try experiments? Do they reflect that in asking us to rush rashly into every novelty they ask us to trifle with life, with human life, with that which God alone can give, which man cannot give, but may destroy? Man can bring down from heaven the lightning and the thunder. He can rival the earthquake in destruction, and rend the solid mountain. He can consume with winged fire the cities of the earth, realising the horrors of the day of doom. He can annihilate life in the most majestic of created beings, but he cannot restore it to the poor earthworm he has trodden upon in a garden walk. And it is this life, this gift which God has reserved for His own power alone to grant, that ignorance, rashness, and assumption call upon us to trifle with, to experiment upon, as if the injured frame of man were of no more value than a damaged chariot, or the trembling breath of life of no more consequence than a flickering gas-light. Our duty is not to reject anything, but to put carefully and cautiously to the test of trial all that comes to us, come from where it may, provided it come with the stamp of common sense and trustworthy evidence; but, on the other hand, we are not justified in subjecting human life to be trifled with in experiments that have neither common sense nor trustworthy evidence to recommend them, and with no other support than the assumption of the charlatan, the ignorance of the fool, or the selfish trickery of the knave."

After a few more observations, Dr. Corrigan concluded his able address in the following appropriate terms:—"There now remains only for me to say a few words upon the demeanour to be observed within these walls, consecrated to the relief of pain and suffering, and I am happy to think I have little to say, for, whether within our Hospital walls or outside them, the conduct of the Medical students of Dublin —upwards of a thousand in number—has ever been marked by propriety; and wherever they happen to be afterwards placed, in military, naval, or civil service, their conduct is equally deserving of praise, for we seldom hear of a Medical officer as the subject of censure or dismissal. In our intercourse with the poor in Hospital we never forget, and neither will you, that the poor who come to us here are to be treated with the same consideration as the rich. The rich can go where they like—the poor have no choice. If the poor obtain the highest Medical aid in the Hospitals of our city, they pay a price for it. Their cases are lectured on—their diseases are the subject of scrutiny, and their bedsides are the places for your instruction. There is one class of our pupils from whom more is to be expected than from all the others— our resident pupils and clinical clerks. They are our representatives in our absence. They are our staff. To us they give the best assistance. To younger pupils they can give good example. It speaks well for our pupils that wherever clinical instruction is best carried on—wherever pupils are placed in charge of patients, there into such Hospitals the poor are most anxious to enter. The attentive pupil is ever the kind Samaritan. Thus with kind feelings on all sides, with kind care of the poor, and trust and gratitude from them in return, with a desire on your part to learn, on ours to instruct, we shall labour well together. From our walls young men as they have gone forth for years, will still go forth to the public service or to their several lots in life, a credit to themselves and to us."

In the afternoon of the same day the inaugural address of the Medical Faculty of the Catholic University was delivered by Dr. Ellis, in the Medical School, Cecilia-street. In the course of an able and interesting lecture the learned Professor dwelt upon the importance of self-culture, which he illustrated by many remarkable examples of eminent individuals. He also gave a clear and succinct exposition of the present state of physiological science, chiefly with a view to exhibit to the more youthful members of his audience what a wide field for future investigation still lies before them.

In the University of Dublin the opening lecture was delivered upon this day, Wednesday, November 4, by Dr. M'Dowel, Professor of Anatomy and Physiology, who chose for his subject the rapid progress which has recently been made in the elucidation of the functions of the nervous system, whereby unexpected connexions have been traced between derangements of that system and many diseases whose dependence upon it was formerly not even suspected, as, for example, herpes zoster, both in its ordinary form, and in that affecting the orbital region, as delineated by Hebra; or the triple disease known by the name of cachexia ophthalmica, first described by Dr. Graves.

REPORTS OF SOCIETIES.

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THE PATHOLOGICAL SOCIETY.

TUESDAY, NOVEMBER 3.

Mr. PRESCOTT HEWETT in the Chair.

DR. GIBB exhibited

A LIVING MALE INFANT, WITH LARGE SWELLINGS OVER THE RIGHT SHOULDER AND HIP JOINTS OF A DOUBTFUL NATURE.

The child was six months old, and emaciated to an extreme degree. When two or three weeks old, a swelling formed in front of the right shoulder-joint, and extended into the sheath of the pectoral muscle, which was quite prominent; shortly after the right hip began to swell in a similar manner; and, finally, the right parotid region, which was occupied by a swelling the size of an egg. All were more or less fluctuating, but their nature was at present doubtful. There was no specific history, and the child took the breast well. It was one of nine children, seven of whom were dead.

Mr. HENRY LEE exhibited a specimen of

EXFOLIATION OF THE MUCOUS MEMBRANE OF THE BLADDER.

The specimen, though not unique, was, he said, very rare. The patient was admitted in a state of extreme depression. She had putrid abscesses, and passed bloody urine. At the autopsy the mucous membrane was found detached and folded up in the bladder; the muscular fibres were exposed.

Dr. MARTIN then gave particulars of a case of exfoliation of the mucous membrane of the female bladder. The exfoliated membrane contained also muscular fibres. Dr. Martin thought that the exfoliation in such cases was probably due to the caustic action of retained ammoniacal urine.

Mr. MAUNDER then referred to a specimen he exhibited last session. It was said by the patient, a female, to have been passed from the bladder, but Mr. Henry Thompson and Dr. Murchison, who reported on it, thought that it was probably the bladder of a bullock. Dr. Knox told him that Mr. Liston removed by operation (above the pubes) a cast from the bladder of a male patient. Mr. Maunder thought it just possible that his specimen might have been of the same nature as Mr. Henry Lee's.

Mr. HENRY THOMPSON said there was no doubt that there were cases in which the mucous membrane of the bladder actually did exfoliate, but he still thought that Mr. Maunder's case was not one of the category. His patient was a hysterical woman, who had had no symptom of severe cystitis. Mr. Henry Thompson then referred to Mr. Liston's case, and said that the cast and bladder were in the Museum of the College of Surgeons.

Dr. ANDREW CLARK had examined Mr. Maunder's specimen, and did not think that it was a cast of the bladder. He asked Mr. Lee if his specimen was more than a desquamation of the epithelium.

Mr. HENRY LEE said that as the muscular fibres of the bladder were quite dissected out, he considered it to be an exfoliation of the mucous membrane.

Dr. GRAILY HEWITT stated that in a specimen of a similar kind brought before the Obstetrical Society, and which had been subjected to very careful examination, muscular stricture was very evident, and, in fact, a great part of the thickness of the bladder appeared to have been evacuated. In the case in question the accident resulted from prolonged retention of urine after delivery. The physical distension of the bladder was, he believed, the cause of the death of the lining membrane in these cases.

Dr. Andrew Clark, Dr. Murchison, and Mr. Henry Thompson were requested to make a report on the specimen.

Dr. WILKS brought forward several specimens illustrative of

CIRRHOSIS AND CHRONIC ATROPHY OF THE LIVER.

Dr. Wilks reminded the Society that the theory of cirrhosis most usually taught of late years was that, owing to the imbibition of alcoholic fluids into the portal veins, an inflammation of Glisson's capsule took place, with an exudation of lymph, which contracting, squeezed, as it were, the intervening tissue into rounded nodules. An objection had long existed that, with the addition of a new material to the organ, the latter constantly wastes, so that in many cases no exudation can be discovered. Of late years, by the aid of the microscope, it has been clearly shown that in many cases no inflammatory product has been present, but that the granulation has been produced by the atrophy of intervening portions of tissue. Dr. Wilks had verified these observations, and had found that in many of the worst forms of cirrhosis, no inflammatory fibre tissue was discoverable; he did not, however, think that the most novel theory was to upset, of necessity, the older; and, as regarded cirrhosis, he believed that both the old and the new explanation were correct. In some cases a large quantity of new fibrous material was formed, as in a specimen which he brought to the Society at its last session, and as in the example which he now had before him. He thought that there was a form of disease where this adventitious material existed in large quantity, and the intervening nodules very large; other cases where it was less in quantity; others where a granulation existed, owing to a simple atrophy of portions of the tissue; whilst in others an atrophy existed without any granulation at all, and such a specimen he had before him. It was taken from a man sixty years of age, in Guy's Hospital, with ascites, which was evidently due to hepatic obstruction. A nodulated edge to the liver could be felt, which made it a question whether the liver was merely of irregular shape, or contained cancerous tubera. After the man's death, the first appearance of the liver suggested the latter to be correct, for the left lobe of the liver had upon it a number of well-defined tumours, and on a section these were found to be composed of a material much softer than ordinary hepatic tissue. Between these was a quantity of dense fibrous tissue; and on a microscopic examination of the nodules or tumours they were found to be composed of hepatic structure. Such a case showed an extreme and unusual form of the disease; lesser degrees were not uncommon, and the cases where, in a granular liver, no adventitious tissue could be found, were also constantly met with. The case where there was no granulation but simple atrophy, came from a man who was admitted with hepatic ascites, but after whose death the liver, when removed, did not appear cirrhosed, as was suspected; it was smooth on its surface, and its section did not present any morbid appearance to the naked eye. It was, however, remarkably small, and the microscope showed the secreting cells of only a half or a third of their natural size. There appeared also some thickening of the portal veins. Dr. Wilks said, although these two specimens presented such different outward appearances, they might be advantageously studied together, as having usually the same exciting causes, the same symptoms, and the same essential pathological change in the obstruction of the portal veins; the difference being the existence of the nodules, and the presence of more or less fibrous material, He also alluded to the fact of cirrhosis beginning sometimes as a capsulitis, and in connexion with this showed a spleen which had undergone cirrhosis in common with the liver. Dr. Wilks thought that these chronic changes in the liver might be advantageously compared with corresponding ones in the kidney. As regarded his first example, where a quantity of new fibrous tissue was formed, he was not prepared to say that a similar condition of kidney existed, for he had always questioned the observation of those who maintained that an intertubular exudation took place in the granular degeneration, but if such theory were correct, the diseases in the two organs might be well compared. In the majority of cases of cirrhotic atrophy in the liver and kidney, the changes, he thought, were very much alike; the granules being formed in both cases by the wasting of intervening tissue, and as regards the last specimen of simple atrophy of the liver without any granulation, this had its counterpart in the case of those very small kidneys sometimes met with, which, presenting nothing remarkable to the naked eye, or looking like kidneys in miniature, are yet found to have undergone a considerable atrophy, or often a cystic degeneration.

Dr. WILKS also exhibited a specimen of

FRACTURE OF THE SKULL FROM A LUNATIC WITHOUT ANY SYMPTOMS.

A lunatic had been much beaten about the head by a brother madman, fracturing his skull in several places. After the immediate effects of the concussion had passed off, he appeared as well as usual, ate his dinner, and remained in his usual health for some weeks, when he died apparently from disease, quite unconnected with the injury. The specimen was sent to the Society to illustrate the fact of lunatics being less susceptible of impression than sane persons.

Mr. Francis Mason exhibited a drawing and specimens from a case of

CONGENITAL FIBRO-CELLULAR TUMOUR OF THE TONGUE

removed from a patient aged 27, at King's College Hospital, in the month of August. This tumour measured 2½ inches in length, 1½ inch in breadth, and ½ inch from before backwards. There were two other tumours of smaller size attached to the tongue. All were soft but firm, with a smooth, shining surface, and connected with the organ by a narrow pedicle. A ligature having been placed upon the pedicle, the largest growth was removed. A section showed the bands of fibro-cellular tissue, with a quantity of light yellow fluid, much resembling fat, which exuded from the cut surface. Under the microscope could be seen the delicate undulating fibro-cellular tissue, with numerous nucleated cells. The tumour was covered by squamous epithelium, and no ciliæ could be detected.

Dr. Crisp exhibited

DISEASED RENAL BODIES, WITH BRONZING OF THE SKIN,

from a female, aged 54, whose face was much bronzed, and the skin generally of a uniform dark colour, the latter appearance having existed for about three years. The patient had, four or five weeks before death, a feeble pulse; white furred tongue; sickness, great debility, restlessness, and pain in the back. The abdominal organs, with the exception of the renal bodies, were sound. The right renal body weighed only 16 grs., and was composed chiefly of amorphous cells and fibrous tissue. The left weighed 1 oz. 1·82 grain; its normal structure being entirely replaced by fatty deposit.

Dr. Gibb, who also saw this patient, thought that the capsules were probably diseased.

Dr. Crisp believed that a great many cases described under the head of "bronzed skin" did not properly come under that title, and he thought that a committee should be formed to analyse and report upon all the cases that had been brought before the Society. The committee selected to make this report did not do so, because it was stated that their time of office had expired; but two members of this committee, Drs. Wilks and Harley, had come to such opposite conclusions respecting the so-called "Addison's disease," that he (Dr. Crisp) thought that the matter should be fully investigated by the Society.

(To be continued.)

LEGAL INTELLIGENCE.

COURT OF QUEEN'S BENCH.—November 6.

BECK V. FAREY.

This was one of two actions brought by the plaintiff, Dr. T. Snow Beck, against two persons named Farey and Sterne, to recover fees for alleged Medical attendance so long ago as 1859, and for which no claim was made until after a quarrel between them and the plaintiff. The cases were both tried at the last assizes at Croydon—one, the present case, before Mr. Baron Channell, the other before Mr. Baron Bramwell. The former resulted in a verdict for the plaintiff; but in the other action, against Sterne, the plaintiff failed. In the present case, as in the other, there was strong evidence that the alleged attendance by the plaintiff had been friendly visits, or gratuitous attendance on the occasion of such visits; but £10 was paid into court, and, as the learned judges now observed, this probably explained the verdict in favour of the plaintiff in this case. The learned judge stayed execution; and,

Mr. Serjeant Petersdorff, on the part of the defendant, moved to set aside the verdict, as against evidence.

The Court said they would consult the learned judge, Mr. Baron Channell; and, having done so, they, to-day, said that they should grant a rule *nisi* to set aside the verdict.

BECK V. STERNE.

This was the other of the two actions above-mentioned, and it was a claim for £559, for alleged Medical attendance during a lengthened period of time, some years ago, between November, 1856, and July, 1859. The case was tried before Mr. Baron Bramwell and a special jury. The case for the defence was that the "attendances" were really gratuitous, and took place in friendly visits, for which it was never intended or understood that there should be any charge; and further, that for any services really rendered, the plaintiff had received payment or presents. The jury having heard the plaintiff and his witnesses, at once made up their minds against him, and, without requiring to hear any evidence for the defence, found a verdict for the defendant, upon which the learned judge expressed a strong opinion against the action.

Mr. Serjeant Shee, on the part of the plaintiff, moved for a new trial, on the ground that the verdict was against evidence. The learned serjeant said that the case had been really blown out of court by judge and jury. They laughed the case away. (Laughter.)

The Lord Chief Justice: I am afraid you would not wish us to refer to the learned judge.

Mr. Serjeant Shee: Oh, no! my lord—I know well what he would say. (Laughter.)

Mr. Justice Mellor asked when the first account had been sent in.

Mr. Serjeant Shee said certainly no account had been sent in until no long time before action.

The Lord Chief Justice said the Court would consult the learned judge.

The Court ultimately refused to grant a rule for a new trial.

LOW *v.* ELLIOTT.

This was a case tried at the last assizes at Carlisle. The plaintiff was a dentist, and he complained of a slander by the defendant, a Medical man, to the effect, as alleged, that a patient of his had died under the influence of chloroform, and that the body was smuggled away to burial without an inquest. There was no foundation for this charge, and the jury gave £100 damages.

Mr. Temple, Q.C., moved for a rule to set aside the verdict; but

The Court thought there was no ground for the application.

COURT OF EXCHEQUER.—November 6.

(*Sittings in Banco, before the* Lord Chief Baron, *Mr. Baron* Bramwell, *Mr. Baron* Channell, *and Mr. Baron* Pigott.)

BENNETT V. HICKSON.

This case was tried at Nottingham, before Mr. Justice Williams, when a verdict was found for the plaintiff for £100.

Mr. Cave now moved for a rule for a new trial on the ground of misdirection, and that the damages were excessive.

The action was brought by the plaintiff, a Surgeon at Worksop, against the defendant, who was the executor of Mr. T. L. Beardsall, upon an agreement by which the defendant, on March 3, 1859, sold the practice of his testator to the plaintiff, and undertook that he and his co-executor, Mr. W. G. Beardsall, would use their best endeavours to establish the plaintiff in that practice.

The breaches complained of were—first, that the defendant's co-executor had said of the plaintiff that he would not be long at Worksop, as his charges were too high; secondly, that the defendant's co-executor had competed with the plaintiff for the post of Medical officer to the Abbey Lodge of Odd Fellows, which had been held by the defendant's testator, and which produced £8 15s. per annum; and, thirdly, that the defendant's co-executor had contested a similar post which had not been held by the testator.

Mr. Cave contended that these were not breaches of the agreement; or, that if they were, the damages were excessive.

The Lord Chief Baron remarked that it was difficult to see how the saying of a Doctor that his charges were too high was a breach of an engagement to introduce him to the practice he had purchased. So, also, the third offence complained of did not appear to amount to a breach of the agreement. Mr. Cave had better, therefore, take a rule on the ground of misdirection, as well as that the damages were excessive and the verdict against evidence.—Rule accordingly.

November 9.

(*Sittings in Banco at Westminster, before the* Lord Chief Baron, *Mr. Baron* Martin, *Mr. Baron* Bramwell, *and Mr. Baron* Channell.)

MORGAN *v.* LINGEN.

Mr. Huddleston, Q.C. (with whom was Mr. Powell, Q.C.), moved for a rule for a new trial in this case, which was tried at Gloucester before Mr. Baron Martin, on the ground of misdirection and the improper reception of evidence.

The action was one for slander and libel brought by the plaintiff, a governess, against the defendant, a Surgeon, for saying and writing of her that she was "under delusions," that she was "off her head," and, in fact, "she is insane."

Both parties reside at Hereford, and the action was brought in that county, but the venue was subsequently changed to Gloucester. Mr. Serjeant (now Baron) Pigott, Mr. Huddleston, Q.C., and Mr. Powell, Q.C., were counsel for the plaintiff; Mr. Cooke, Q.C., Mr. Gray, Q.C., and Mr. Henry James appeared for the defendant. The jury returned a verdict for the defendant.

It appeared at the trial that some altercation had taken place at a flower show at Hereford between the plaintiff and the defendant's wife, each accusing the other of having behaved rudely; and that in consequence of this and other statements which reached the defendant's husband of the plaintiff's conduct he said and wrote to the plaintiff's brother and sister and several other persons the matter complained of. The defence was that the plaintiff had so acted, that the defendant had good grounds for believing what he had said and written to be true, and, consequently, that the communication was privileged; and the jury adopted that view of the matter. It was now contended that evidence of the plaintiff's previous conduct, and of conversations by other persons with her brother respecting it, were not admissible in evidence as tending to prove the truth of the slanders and libels which had not been pleaded; and also that the learned Baron misdirected the jury in telling them that the defamations complained of did not apply to the plaintiff in her professional capacity, and moreover that if the jury believed that the defendant had acted *bonâ fide*, that it was justifiable under the circumstances.

After hearing the case argued at considerable length, the Court were of opinion that there was no ground for disturbing the verdict. Baron Martin added that he never heard any one give evidence in a more satisfactory manner than the plaintiff had done, and he could hope that the matter might be allowed to rest where it was, without calling upon her to pay the costs of the action.—The rule was refused.

November 11.

BAKER *v.* THE GUARDIANS OF THE BILLERICAY UNION.

This was a special case, stated by an order of *Nisi Prius*.

The plaintiff is a Surgeon, and one of the Medical officers of the Union, and claimed for Medical fees beyond the salary which he was entitled to as Medical officer, which appointment was with the consent of the Boor-law Board, and his remuneration fixed by Articles 177 and 183 of the General Consolidation Order of the Poor-law Board, dated July 24. Article 177 says "that no salary of any District Medical officer shall include the remuneration for operations and services of the following classes performed by such Medical officer in that capacity for any out-door pauper, but such operations and services shall be paid for by the Guardians according to the rates specified, the supply of all kinds of apparatus, etc., to be included. Compound fracture of thigh, dislocation of leg, amputation of leg, arm, foot, or hand, and operation for strangulated hernia, £5 each; simple fractures or simple dislocations of the thigh or leg, £3; amputation of a finger or toe, £2; treatment of a dislocation or fracture of the arm, £1." Article 183 states, "provided that in any special case in which great difficulty may have occurred in the delivery, and long subsequent attendance in respect of some puerperal malady or affection may have been requisite, any district Medical officer shall receive the sum of 2*l.* The plaintiff claimed in June, 1862, for extra Medical fees accruing due in the half-years ending December 29, 1861, and March 25, 1862, and the Poor-law Board had not made any order (which they had the power to do under the 22d and 23d of Victoria, cap. 49), extending the time within which the fees might have been paid to the plaintiff. The defendants pleaded embodying the above Act, which enacts in substance that no money shall be paid for debts of guardians, unions, or parishes, except within the half-year in which they were incurred, or within three months afterwards, or except by express order of the Poor-law Board, and within 12 months from the date of the order. The substantial question to-day was whether the Act prohibited an action for debts not paid within one of the above periods, or whether the effect of the Act was to prevent a successful plaintiff from getting execution if the proper authorities were applied to prevent him.

Mr. Keene argued for the plaintiff, and Mr. C. E. Pollock for the defendants.

The Court was unanimously of opinion that the defendants were entitled to judgment.

COURT OF PROBATE AND DIVORCE, November 10.

(*Before Sir* J. Wilde, *Mr. Justice* Wightman, *and Mr. Baron* Channell.)

STONE *v.* STONE AND APPLETON.—JUDGMENT.

The petitioner in this case, Captain Stone, charged his wife with adultery, and prayed for a dissolution of marriage. The respondent denied the charge, and the co-respondent did not appear. The cause was tried before Sir C. Cresswell and a special jury, and after a trial which occupied several days a verdict was returned for the petitioner, and the damages against the co-respondent were assessed at 2000*l.* The petitioner had been a captain in the Indian army, and the co-respondent was the Medical attendant of his wife and family. The adultery was alleged to have taken place at the village of Budleigh Salterton, in Devonshire, during Captain Stone's absence in India, and one of the principal questions raised at the trial was whether a child to which Mrs. Stone had given birth between seven and eight months after her husband's return from India was or was not a full-grown child. After a verdict an application for a rule *nisi* for a new trial was made to Sir C. Cresswell, who rejected it. The respondent appealed from that decision to the full Court, and their Lordships granted a rule *nisi*. Cause was shown against the rule *nisi* by the Queen's Advocate and Mr. Lopes on the part of the petitioner, and it was supported by Mr. Karslake, Q.C., Dr. Spinks, and Mr. Searle on the part of the respondent. After hearing the argument the Court had taken time for consideration.

Mr. Justice Wightman delivered judgment. He said—In this case my brother Channell and myself have with much care read and considered the evidence, parole as well as documentary, and we are of opinion that the evidence of adultery by Mrs. Stone is not sufficiently strong to make the present verdict wholly satisfactory; and, considering the effect it must have on Mrs. Stone's future condition and happiness, we think the case should be submitted to another jury, and that the rule for a new trial should be made absolute. We do not think it necessary, or indeed proper, to say more, but the case ought to undergo further investigation. Our opinion is entirely founded on what we consider the insufficiency of the evidence to make out the adultery. But we cannot conclude without expressing our regret that in that opinion we differ from the late lamented Judge-Ordinary, whose loss we, in common with the rest of the public and all who knew him, most sincerely deplore, and whose learning and talents adorned the seat of justice; but entertaining the opinion we do, we are bound to act upon it. I may add that before the unfortunate accident which deprived the Court and the public of a most admirable judge and us of a truly kind friend, he was aware of the opinion we had then formed, and knew we were disposed to think there should be a new trial in this case.

The rule was accordingly made absolute for a new trial. This is the only case in which any decision of Sir C. Cresswell has been reversed on appeal since the Court was established.

DAVIES V. ROYSTON—ILLEGAL PRACTICE.

We learn from the *Flintshire Observer* of November 6 that Dr. John Conway Davies, of Holywell, has caused Mr. Thomas Royston, of Flint, to be brought before the Flint Borough Petty Sessions for having "acted as Physician, Doctor in Medicine, Apothecary, etc., to a Friendly Society called the 'St. Barnabas' club, held in the borough of Flint, in the said county of Flint, and also as Medical Officer to an Odd Fellows Society, contrary to the Medical Act of 1860." Evidence was brought forward in support of the charge, the chief witness being the defendant's own son.

William Royston said he was son to the defendant; the bill for attendance to Wm. Parry is in my father's handwriting, but I received the money (£5 3s. 9d.), and settled it.

The bill was worded: "The Loyal Flint Lodge—To T. Royston, 'M.D.'—Medicines and attendance on William Parry, £5 3s. 9d."

William Royston continued—My father has practised ever since I can remember, and I can remember twenty-four years.

Michael Dod said he was a member of the lodge; got a certificate from Dr. Royston; he attended me as Doctor of the lodge; saw Dr. Royston sign the certificate. The certificate was produced, and was signed "Thomas Royston, M.D."

After hearing defendant's counsel, the magistrates reserved their decision.

MEDICAL NEWS.

Royal College of Physicians and Surgeons, Edinburgh.—The following gentlemen passed their First Professional Examinations during the recent sittings of the Examiners:—

Latham B. M'Culloch, Drogheda; John M'Carthy, Cork; Joseph L. Kingston, Cork.

The following gentlemen passed their Final Examinations, and were admitted L.R.C.P. Edinburgh, and L.R.C.S. Edinburgh:—

Joseph Mackenzie, Belfast; William Davidson Tindal, Montrose; James Jeffrey Hardesty, Edinburgh; Thomas Sheriff, Northumberland; Henry Glover, Co. Down; David Munro, Dunfermline; Hugh Boyd, Ayrshire; John M'Gibbon, Crieff; James Snodgrass Mathews, Edinburgh; Jean Baptiste Jèrèmie Gassin, Mauritius.

Royal College of Surgeons of England.—The following gentlemen passed their Primary Examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 10th inst., and, when eligible, will be admitted to the Pass Examination:—

Messrs. T. D. E. Finch, S. B. Haliday, A. M. Bligh, Henry Commins, and E. F. Cogblan, of Dublin; Daniel Hudson, David Griffiths, B. B. Thurgar, and A. O. Grosvenor of Edinburgh; J. S. Dickinson, C. E. H. Rogers, and W. F. Vise, of the Middlesex Hospital; William Sheldon, A. R. Busby and Frederick Philpot, of the University College; Charles Lyddon, Frederick Earle, and T. E. Blick, of St. Mary's Hospital; Andrew Wise and William Ray, of Guy's Hospital; Edward Dyer, and J. G. Mackinlay, of the Charing Cross Hospital; A. S. Lethbridge, and T. D. Atkins, of Calcutta; E. St. P. Hadwen, of the Westminster Hospital; C. G. Ring, of St. George's Hospital; C. C. Clayworth, of the London Hospital; W. R. Coward, of Newcastle, and P. J. D. Lebrun, M.D., of Belgium.

Royal College of Surgeons, Edinburgh.—The following gentlemen passed their First Professional Examinations during the recent sittings of the Examiners:—

John M'Gregor, Caithness; John Livingstone, Perthshire; Wm. Walker Kilbirnie; James Provan, Dunbar.

The following gentlemen passed their Final Examinations, and received the Diploma of the College:—

Peter Maury Deas, Edinburgh; George Edward Wright, Yorkshire; Joseph O'Kelly, Co. Tipperary; John Francis Hartland, Co. Cork: James Robertson, Aberdeenshire.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, November 5, 1863:—

William Augustus Norton, 44, Kensington-park-gardens; William Gill, Truro, Cornwall; Cornelius Benjamin Fox, Truro, Cornwall; George Thomas Joynson, Northwich, Cheshire; Thomas John Peatfield, Edwinstowe, Notts; George Kemp, 17, Eyre-street, Sheffield; James Beddard, Edgbaston, Birmingham.

The following gentlemen also on the same day passed their First Examination:—

Edmund Woods Hawkins, London Hospital; Ernest Last Fyson, Guy's Hospital; George Rendle, Guy's Hospital; Joseph Bower Siddall, St. Thomas's Hospital; William Nicholas Heygate, St. Thomas's Hospital.

At the recent examination for Prizes in Materia Medica and Pharmaceutical Chemistry, given by the Society of Apothecaries, the successful candidates were:—1st. Thomas Claye Shaw, King's College, gold medal; 2nd. Philip Cowen, St. Thomas's Hospital, silver medal and a book.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Agnis, John C., F.R.C.S. Eng., has been appointed Junior Surgeon to the West London Hospital.

Bridson, John, M.D. Edin., has been elected Surgeon to the Isle of Man General Hospital and Dispensary, Douglas, Isle of Man.

Ferris, Mr. J. S., has been elected Resident Physician-Accoucheur to King's College Hospital.

Kempthorne, H. L., L.R.C.P., has been elected House-Physician to King's College Hospital.

Parker, Edward, F.R.C.S. Edin., has been appointed North Divisional Surgeon to the Liverpool Police Force.

Pollock, E., M.R.C.S. Eng., has been elected House-Surgeon to King's College Hospital.

Trevan, William F., F.R.C.S. Eng., has been appointed Surgeon to the West London Hospital.

Wearne, V., M.R.C.S. Eng., has been elected House-Surgeon to the Devonport, Stonehouse, and Cornwall Hospital and Eye Infirmary.

DEATHS.

Brattle, William, M.R.C.S. Eng., at Sulhampstead-Abbots, Berkshire, on October 18.

Brewer, William, M.R.C.S. Eng., at Newport, Monmouthshire, recently, aged 96.

Camplin, John M., M.D., of Compton-terrace, Islington, and 11, Finsbury-square, E.C., on November 3, aged 78.

Enscoe, John, Dr., at the Seamen's Hospital, Hong Kong, China, on August 30.

Scannell, Daniel, M.R.C.S. Eng., at Chapel-street, Belgrave-square, S.W., on November 1.

University Intelligence.—Oxford, November 5.—In a Convocation holden this morning the following gentlemen were approved as examiners in the first examination required for the degree of Bachelor of Medicine, viz.:—G. Rolleston, D.M., Pembroke; H. J. M. Smith, M.A., Balliol; Sir B. C. Brodie, M.A., Balliol; and for examiners in the final examination for the same degree the names of J. W. Ogle, D.M., Trinity; H. Monro, D.M., Oriel, were approved. Durham.—Dennis Embleton, M.D., F.R.C.P., Reader in Medicine in the University, was elected a member of the General Council of Medical Education and Registration of the United Kingdom for the term of five years.

The Chair of Zoology at the Faculty of Sciences, Paris.—This important Chair, which has remained vacant for two years, since the death of its late eminent possessor, Isidore Geoffroy St. Hilaire, is about to be immediately filled up, M. Gratiolet receiving the nomination.

The Leopoldino-Carolinan Academy.—This body, of which Dr. Carus, of Dresden, is now President, so well known to the scientific world by its important *Acta and Nova Acta*, at the present time numbers 570 members. Of these there are 333 in Germany, 46 in France, 34 in England, 27 in Italy, 5 in Spain, 2 in Portugal, 4 in Hungary, 5 in Denmark, 7 in Sweden, 30 in Russia, 2 in Poland, 16 in Switzerland, 24 in Holland and Belgium, 13 in Asia, 4 in Africa, 20 in America, and 2 in Australia.

Impudence.—"A person calling herself Mrs. Major Gage, Surgeon U.S.V., has been representing herself to Surgeons in charge of Hospitals in the North as holding the President's commission as such, and demanding quarters, fuel, etc. It is needless to say that no such person is known or recognised by the Medical Department."—*American Medical Times.*

A Geological Canard?—The turning up of a horse-shoe, real iron, from a depth of seven metres in the diluvium of pre-Adamite deposit, bids fair to put out of joint the famous Abbeville jawbone. The phenomenon has been found on railway excavation in the Orne Valley, between Caen and Condé. The *Journal du Calvados* gives ample details, adding that not only horse bones and sundry other antediluvian fauna, but skeletons of the Hudson's Bay beaver are plainly recognisable.—*Globe.*

University College, London.—The Council held their first Session of the academical year 1863-64 on Saturday. A check for £3000, a gift to the College by Messrs. Cama and Co., the Parsee merchants, was presented by Sir Edward Ryan. A letter was read as follows:—"London, Nov. 2.—Dear Sir,—We are desirous of testifying to the advantages afforded by University College to our countrymen in enabling them to obtain a college education without interference with the religious creed inherited by them from their ancestors; and we beg to accompany our acknowledgments of the enlightened and tolerant spirit of the founders and directors of such a noble institution with a donation of £3000 to the funds of the College, to be applied in such manner as the Council think fit. We have great pleasure in sending our check for the amount through you, knowing the kind interest you have taken in our countrymen, of which we have seen so many proofs since our first establishment in this metropolis in 1855, and we remain, with great respect, yours very faithfully, Cama and Co. To the Right Hon. Sir Edward Ryan." A suitable acknowledgment of this munificent donation was voted to Messrs. Cama and Co., and also a vote of thanks for their recent donation of £1000 to the Hospital.—The Filliter

Exhibition of £30, for proficiency in Pathological Anatomy, was awarded to Mr. Alexander Bruce. By the recommendation of the Faculty of Medicine, the Longridge Prize of £40, for general proficiency in Medicine and Surgery, was also conferred on Mr. Alexander Bruce.

The Site of St. Thomas's Hospital.—On November 5 at two o'clock, a special Court of Common Council was held at the Mansion-house, in pursuance of a requisition to the Lord Mayor to consider a petition of a committee representing the vestries, boards of works, and boards of guardians of parishes on the south side of the Thames, for the assistance of the Corporation, either independently or in co-operation with them, in their opposition in the Court of Chancery to the site at Stangate selected for the erection of St. Thomas's Hospital, and also to aid them gratuitously with the needful witnesses and documents. The Lord Mayor took the chair. The memorial was supported by Mr. William Rendle, Surgeon, Chairman of the Committee, and by Deputy Elliott. It was agreed that the memorial should be referred to the General Purposes Committee of the Corporation, to take such steps as they might deem desirable in the matter.

Gratuity to a Poor-Law Medical Officer of the Camelford Union.—The Board of Guardians of this Union, at a recent meeting, voted a gratuity of £5 to Mr. James Somer, Medical officer of the Bocastle district, accompanied with the following letter of thanks:—"Camelford Union, October 17, 1863.—Dear Sir,—The Board of Guardians having considered the long-continued case of Mary Clements, and your constant care during her painful sickness, on the 2nd instant passed the following resolution:—'Resolved,—That Mr. Somer, the Medical officer of the Bocastle district, be granted the sum of £5 on his application for a gratuity in the matter of Mary Clements; and that the thanks of this Board be conveyed to him for the zealous discharge of his duty in the case.' The Poor-law Board having approved of the grant, I have much pleasure in sending you the enclosed cheque for £5, signed by the guardians yesterday, as well as the copy of the resolution containing their generous acknowledgment of your services.—I am, dear Sir, yours truly, C. Hawker, Clerk."

Ulster Medical Society.—The November meeting of this important association was held in the Society's rooms, High-street, on November 3, at three o'clock. Amongst those present were Professor Ferguson (Queen's College); Dr. Saunders, (Staff-Surgeon, 2nd Dépôt Battalion); Dr. Arnold, Dr. Cuming, Dr. Dill, Dr. M'Gee, Dr. Wheeler, Dr. Browne, R.N.; Dr. Whitaker, Dr. Keown, R.N.; Dr. David Moore, Dr. Gribben, and Dr. MacCormac, etc. The chair was occupied by the President, Dr. Patterson, who delivered the inaugural address, which was of considerable length, and was listened to with marked attention by all present. The President instituted a comparison between the Physicians of the present and those of the past age, and expressed his belief that the Profession contained within its ranks a greater number of accomplished and highly-educated Practitioners now than in any past period of its history. He then went on to speak of the recent Medical Act, and its probable bearing on the future position of the Medical Profession. At the conclusion, the thanks of the meeting were moved by Dr. M'Gee, and seconded by Dr. Arnold, who feelingly referred to the loss the Society had sustained within the past year in the death of two of its members (Drs. Greenfield and Hanna), who were both carried off by fever caught in the discharge of their self-denying duties. Dr. Arnold concluded by saying that whilst they mourned the loss of their valued friends, the darkness of the retrospect was illumined by the thought that though gone they had left behind them for their brethren "their memories to revere, and their example to follow."—*Banner of Ulster*, November 5.

Shocking Case at the Curragh.—On Friday evening week, as the ranger of the Curragh was going his rounds, he discovered something apparently concealed under some large firs. On further examination the object turned out to be a poor woman—one of the waifs who are generally to be found near the soldier's camp. She had been there for a considerable time, and was without food or drink, and almost in a state of nudity. The official lost no time in reporting what he had seen to the police and also to the Relieving Officer. But, to his astonishment, as he was going his round on the Monday following, he discovered the same miserable creature in the position in which he left her on the previous Friday, having received no sustenance of any kind since he saw her. After some time he secured the assistance of some of the Poor-law officials, when the unfortunate woman was removed towards the Naas Union Workhouse, when, within sight of the gate, she opened her eyes, but they were immediately closed in death. We believe this is not a rare occurrence at this place, which is accounted for by the fact that, as yet, it has not been decided whether the Curragh is a Common or a Royalty. It is therefore open to camp followers and others of this class.—[*Quere* how many cases of disease might a timely reception of this poor creature have prevented?—Ed.]

Obliteration of the Renal Vein.—As the result of his researches upon this subject, M. Leudet comes to the following conclusions:—1. An absolute obliteration of the cavity of the renal vein by the immediate contact of its walls is very rare. 2. This obliteration seems oftenest to be due to embolism, or to lesions of the kidney, as albuminous nephritis, cancer, stearosis, etc. It has never been proved to exist as a primary occurrence. 3. The renal venous circulation arrested by such complete obliteration is supplemented through the dilatation of the capsular veins and those of the ureter, which may attain an enormous size. 4. This change in the venous circulation may be brought about without the production of any appreciable symptom.—*Gazette Méd.*, 1862. No. 52.

Bromine in Erysipelas, Diphtheria, Gangrene, etc.—Surgeon Goldsmith states that a solution of bromine has been found very useful in the Military Hospitals under the following circumstances:—1. As a prophylactic in wards in which erysipelas has appeared. 2. In the treatment of erysipelas and diphtheria by the inhalation of the vapour and topical application of the fluid. 3. In Hospital gangrene and sloughing sores by the topical application of the fluid. The solution consists of 1 oz. of bromine, 160 grains of bromide of potassium, and distilled water to make a 4 oz. mixture. For *fumigation*, vessels containing an ounce of this mixture should be distributed through the ward in sufficient number to maintain a constant odour of bromine. For the *topical application of the vapour*, dry lint should be applied to the diseased part, and over it a piece moistened with the solution. The whole is to be covered with cerate and oiled silk. The *solution in substance* is applied in cases of gangrene, diphtheria, etc., after drying the parts with charpie, and rendering the sloughs as thin as possible by means of the scissors. The parts are then saturated with the solution by means of a mop or pointed stick, following them in all their anfractuosities by means of the stick or a syringe. The solution should be applied every second hour as long as any putrescent odour is emitted, and until the sloughs become hardened. When the sloughs are thin and diffluent, or the case is improving, the diluted solution may be used. The Surgeon should always apply the solution himself, and take care that the sloughs are well impregnated with it, employing when they are thick the hypodermic syringe. After the solution has thus been used, the vapour, when the situation of the parts admits of it, should be applied.—*American Med. Times*, 1863, No. 12.

NOTES, QUERIES, AND REPLIES.

◆

He that questioneth much shall learn much.—*Bacon.*

An Old Subscriber.—He can recover if he be a registered Practitioner, not otherwise.

P. W. L.—We regret that our present arrangements do not allow the insertion of births and marriages.

Dr. Cappie's paper came duly to hand.

Dr. Cookworthy's letter has been received, and shall appear next week.

T. S. B.—We cannot as public journalists recommend any individual Practitioner. Our correspondent must be aware that if we were to do so we should very speedily incur charges of favouritism. Let him take the advice of his country Medical friends as to what great Surgeon in London, Edinburgh, or Dublin he should consult.

A correspondent at St. Albans informs "Jury List,"—*vide* page 423, October 17, 1863, of the *Medical Times and Gazette*,—that if "Jury" is admitted on the Rolls of Medical Registration, and is actually exercising his Profession, no matter being *sine* Diploma, he, and all others similarly situate, are entirely exempt from serving on juries, etc., etc., of any kind. He refers "Jury" to the 35th Section of the Act 21st and 22nd Vict., which he should have laid before the ignorant vestry.

L. M.—The Midwifery qualifications mentioned by our correspondent are not contained in Section A of the Medical Act, and therefore could not be registered. The General Council can dispense with the provisions of the Act in favour of persons who practised Medicine or Surgery in the Colonies at the time of the passing of the Act. *Vide* Section xlvi.

Marville's Patent Ear-covers (Couvre Oreilles).—These are bags, or rather shells of thin india-rubber, moulded to, and fitting exactly, the external ear. They protect the ear from cold and damp, whilst at the same time they scarcely at all diminish the power of hearing. In inflammatory and other affections of the internal ear and meatus they would give admirable protection to the organ. In bathing also they would be useful to prevent the ingress of water. This ingenious contrivance was exhibited the other night, at the Royal Medico-Chirurgical Society, by Mr. Partridge, and its simplicity and neatness attracted general approbation.

Dr. Edmunds and the Council of the Hunterian Society.—We have received a long statement from Dr. Edmunds on the subject of the dispute between himself and the Council of the Hunterian Society. Dr. Edmunds's letter reiterates his former complaints against the Council for not having given him a fair hearing, and brought him face to face with his accusers. We think that this letter, if published at all, should be published as a pamphlet, and do not think that its appearance in our pages would be of service to Dr. Edmunds (supposing him to have a wrong which ought to be redressed). Without giving the slightest opinion on the merits of the case, we must say we regard it as a general principle that the *forms* of justice ought to be most carefully respected by all public bodies, and that all legally qualified Medical Practitioners, if accused of overstepping the bounds of professional good conduct, should have an opportunity of publicly explaining the facts and defending themselves before being subjected to official censure. The same impartiality compels us also to say that, having only Dr. Edmunds's statement before us, we are not at liberty to assume that he has not had a fair hearing at the hands of the Council of the Hunterian Society, or that that Society acted in any way unfairly or unjustly towards him.

The Late Discovery of Mammoth Remains at Leicester.—A correspondence has been maintained through several numbers of the *Times* as to the position of the mammoth's tusk lately found at Leicester. One person, signing himself "Delta," attributed to Mr. Drake, of Leicester, the absurdity of saying that the said tusk was discovered *in* the Keüper beds, whereas Mr. Drake expressly stated that *beneath* the tusk was a layer of Keüper sandstone. Mr. James Plant, writing in defence of his fellow-townsman and geologist, says:—

"Although found upon the Keüper beds, it is thought that the tusk was not originally deposited there, but that the animal having died in some of the adjacent valleys, its remains, bones, teeth, and tusks, were washed out into the river, then probably two or three miles wide. From the great weight of the tusks it is supposed they would gradually sink through the soft drift gravel until they reached the hard beds of marl below; this would be much facilitated when these gravels were under water. With regard to the 'remains of man,' what Mr. F. Drake, I should suppose, meant was, that if a large portion of these drift gravels which lie all over the valley of the Soar could be removed, the remains of man might probably be found; and, judging from recent discoveries, this is not so very wild a speculation. Great as may be our geological ignorance at Leicester, 'Delta' really must not suppose we believe such remains can be found in the Keüper beds."

Erratum.—In Dr. Cookworthy's letter, published in our last Number, *for* £17,000 *read* £170,000.

The King and Queen's College of Physicians in Ireland and Dr. Bellis.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I am directed by the President and Fellows of the King and Queen's College of Physicians in Ireland to request that you will have the goodness to insert in your paper the annexed resolution, passed at a meeting of the College held on the 6th inst. I am, &c.

Lombe Atthill, Fellow and Registrar.

King and Queen's College of Physicians in Ireland,
Dublin, November 7.

"That the President and Fellows of the King and Queen's College of Physicians in Ireland having received from Dr. Bellis, of Amlwich, his assurance that he took the step of advertising on his first settling at Amlwich without due reflection, that he would not again repeat the advertisements which have called forth the disapprobation of the College, and his expression of regret for what has occurred, do not deem it necessary at present to take any further proceedings, and that a copy of this resolution be sent to Dr. Bellis, and also to the *Medical Times and Gazette*, the *Lancet*, and the *Carnarvon and Denbigh Herald* for publication."

Chlorodyne in the Royal Free Hospital.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Having seen in your Journal of last week a letter signed "J. D. Hill, Resident Medical Officer of the Royal Free Hospital," stating that "Freeman's chlorodyne is not used at this Hospital," I enclose you a copy of a testimonial from Dr. Irwin, late Resident Medical Officer of that Hospital:—

From G. R. Irwin, M.D.; M.R.C.S.; L.S.A.; "*Resident Medical Officer, Royal Free Hospital, London, May* 2, 1861."

"I have much pleasure in bearing my testimony as to the efficacy of your chlorodyne. I have found it invaluable, and in neuralgia and spasmodic attacks it has been beneficial when everything else has failed. As an anodyne its effects are wonderful, and its use not followed by any of the disagreeable effects of opium and its various preparations. I always give it in every case where there is severe pain from whatever cause, and never find it to fail in giving relief, the soothing effects are so great that the patients always beg to have it renewed."

I also wish to state that Mr. Hill himself informed me that my chlorodyne is used in the Hospital by Dr. O'Connor.

I am, &c. Rd. Freeman.

Kennington-road, November 11.

COMMUNICATIONS have been received from—

Dr. J. C. Cookworthy; The Harveian Society; Mr. T. S. Bourne; Dr. James Cappie; Apothecaries' Hall; Mr. J. Brendon Curgenven; Dr. Devenish; Mr. James Robertson; Mr. T. Wright; Mr. F. Galton; Ethnological Society of London; Mr. Charles Hunter; Dr. J. Atthill; King and Queen's College of Physicians in Ireland; L. M.; Dr. C. Kidd; Dr. B. Grattan Guinness; Abernethian Society; Dr. P. W. Latham; An Old Subscriber; Cambridge Philosophical Society; Mr. J. S. Innes; Dr. J. D. Swallow; Mr. R. Freeman; Royal College of Surgeons of England.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 7, 1863.

BIRTHS.

Births of Boys, 1011; Girls, 952; Total, 1963.

Average of 10 corresponding weeks, 1853-62, 1708·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	659	611	1270
Average of the ten years 1853–62	589·9	564·8	1154·7
Average corrected to increased population..	..	..	1270
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	4	..	11	2	2	5	2
North ..	618,210	9	1	34	5	5	10	3
Central ..	378,058	6	3	18	1	10	7	1
East	571,158	2	2	33	5	3	18	2
South ..	773,175	2	7	29	4	9	22	5
Total.. ..	2,803,989	23	13	125	17	29	62	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·781 in.
Mean temperature	47·3°
Highest point of thermometer	60·8
Lowest point of thermometer	34·3
Mean dew-point temperature	43·4
General direction of wind	S.W.
Whole amount of rain in the week	0·86 in.

APPOINTMENTS FOR THE WEEK.

November 14. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

16. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

Medical Society of London, 8½ p.m. The President, "Cases of large Tumours of the Scalp Removed by Operation;" "A Case of Fibrous Tumour of the Uterus." Dr. Routh, "On a Case of Hydrocephalus of several Years' Standing." Dr. Gibb, "On the Removal of a Pin from the Larynx;" "Removal of the Bristle of a Tooth-brush from the Tonsil;" "United Fracture of the Ponum Adami in a Phthisical Boy." Mr. E. Hart, "On Ophthalmic Disease." Dr. B. W. Richardson, "On Iodine as a Disinfectant."

17. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

Anthropological Society of London, 8 p.m. Dr. James Hunt, F.S.A., Pres.A.S.L., "On the Negro; his Place in Nature."

Pathological Society, 8 p.m. Meeting.

18. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m

Hunterian Society, 8 p.m. The Secretary will Read a Communication on a "Case of Death from Shock."

19. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

Harveian Society, 8 p.m. Dr. Drysdale, "On Evidence against the Internal Use of Mercury in Syphilis and other Diseases."

20. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

◆

PROFESSOR HUXLEY'S LECTURES
AT THE
ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

VI.—*The Skulls of Reptilia and Aves.*

The palato-maxillary apparatus presents a considerable diversity of structure in Reptiles and Birds. In all Birds, and in most Reptiles, the pterygoid and the quadrate bones are more or less closely connected, but in the Crocodiles and Chamæleons they are separated. In *Crocodiles* and *Chelonia,* and in the extinct *Plesiosauria,* the quadrate bone is immovably united with the skull, and the other facial bones are firmly and fixedly united with one another and with the cranium. In most Birds and *Lacertilia,* on the contrary, the quadrate bone is movably articulated with the skull, and its motion may be communicated by the pterygoid, the quadrato-jugal and the jugal bones to the fore part of the face. This mobility reaches its maximum, on the one hand, in such birds as the Parrots, in which the beak and fore part of the basifacial axis are united by a sort of hinge with the rest of the skull; and, on the other, in the Serpents, in which, as has been already stated, the quadrate bone is shifted to the end of the squamosal, and the palatine, pterygoid, and maxillary bones are bound only by ligaments to the skull, so that the utmost possible amount of play is allowed to the bones which surround the mouth.

FIG. 47.

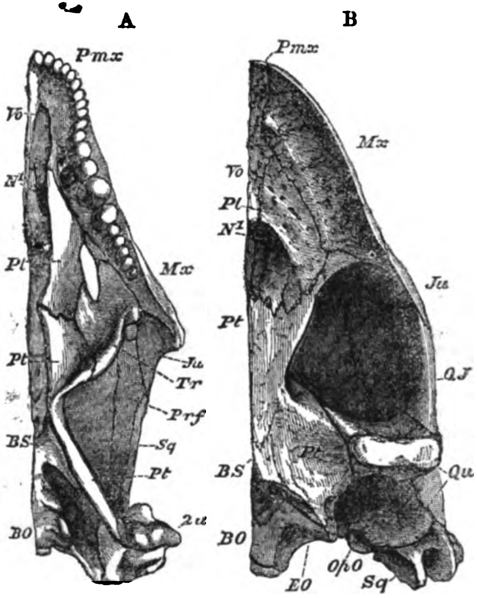

FIG. 47.—Views of one half of the palatine surface of the skull in A, a Lizard (*Cyclodus*), and B, a Turtle (*Chelone midas*). *N*¹, the posterior nasal aperture.

In many Reptiles a bone makes its appearance which cannot, I think, be safely identified with any bone of Fishes or of Mammals. This is the *transverse* bone of Cuvier (*Tr*), which unites together the maxilla with the palatine and the pterygoid.

Remarkable differences are noticeable in the degree to which the premaxilla is developed in the various orders of Reptiles and in Birds. In the Snakes it is very small, or rudimentary; in the *Lacertilia, Chelonia,* and *Crocodilia* it has a moderate size, while in the extinct *Ichthyosauria,* and still more in Birds, the premaxilla attains vast dimensions, completely surpassing the maxillary element, which in Birds is reduced to a mere bar of bone, connected by similar slender rods, which represent the jugal and quadrato-jugal, with the outer part of the distal end of the quadrate bone.

In *Ophidia,* most *Lacertilia,* and Birds, the nasal sacs open below and behind into the cavity of the mouth, by apertures placed between the vomer and palatine bones, which correspond with what I have termed the "median nares" in Man; or there is, at most, an indication of a separation between the oral cavity and the nasal passage, produced by the sending downwards and inwards of a process by the maxillary and palatine bones on each side. But, in the *Crocodilia* (Fig. 48, B), not only the maxillary and palatine bones, as in Man, but the pterygoid bones, in addition, send such prolongations downwards and inwards; and these meeting in the median line, shut off from the cavity of the mouth a nasal passage, which opens into the fauces by the posterior nares (*N*¹, Fig. 48). The arrangement of the palatine bones is such that, in most *Crocodilia,* the vomers are completely excluded from the roof of the mouth.

FIG. 48.

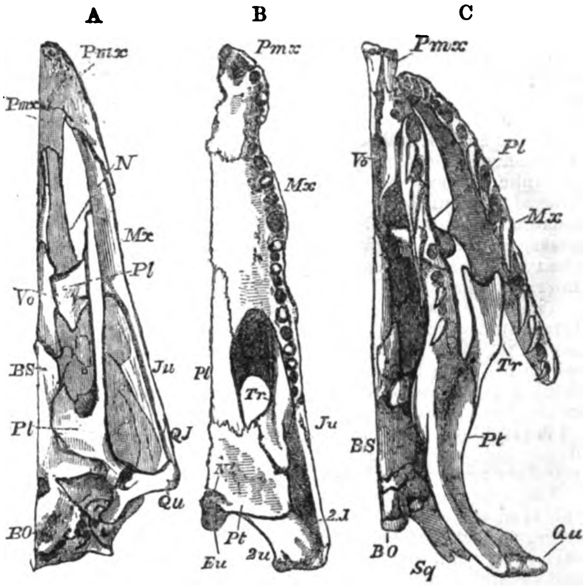

FIG. 48.—Views of one half of the palatine surface of the skull in (A) an Ostrich, (B) a Crocodile, (C) a Python. *N*, the posterior nasal aperture (median nares of Man) in the Bird. The dotted line traverses the posterior nasal aperture, situated between the palatine, the vomer, and the maxillary. The corresponding opening is placed between *Vo* and *Pl* in the Snake. *N*¹, the posterior nasal aperture, or posterior nares, of the Crocodile.

When a tympanic cavity exists in the branchiate *Vertebrata,* it is little more than a diverticulum of the buccal cavity, connected by so wide an aperture with the latter, that an Eustachian tube can hardly be said to exist. In the *Ophidia* and in certain *Lacertilia* the tympanic cavities and Eustachian tubes are altogether absent, and even in the higher *Lacertilia* the tympanum can hardly be said to have definite bony walls. In the *Chelonia,* on the other hand, the opisthotic and the pro-otic bones are produced outwards so as to form the anterior and posterior boundaries of a cavity, the *antivestibulum Bojani*—which is bounded externally by the great quadrate bone. The latter is funnel-shaped, and deeply notched posteriorly and inferiorly. The tympanic membrane is fixed to the margins of the funnel, and the so-called "*columella,*" which answers to the *stapes,* is fastened by one end to this tympanic membrane, and traversing the notch and entering the *antivestibulum,* passes to its other insertion into the membrane of the *fenestra ovalis.* The Eustachian tubes have separate openings into the pharyngeal cavity, and curve upwards and backwards from the latter round the inferior and posterior edges of the quadrate bones to open into the tympana.

In Birds the tympanic cavity is roofed over by the squamosal, while a more or less complete floor is furnished to it by the basisphenoid, and a back wall by the produced ex-occipital (and opisthotic ?). It may be completed in front by fibro-cartilage or even by bone, and the *membrana tympani* is fastened to the outer margin of these boundaries of the tympanum and not to the quadrate bone.

The Eustachian passages ordinarily traverse the basisphenoid, and when they reach the base of the skull unite into a single, cartilaginous, common Eustachian tube, which opens in the middle line, on the roof of the mouth.

In the *Crocodilia* the tympanic cavities and Eustachian passages are still more remarkably disposed (a).

The tympanic cavity of *Crocodilus biporcatus* (Fig. 42 A, Fig. 49) (b) is distinguishable into an inner and an outer part. The latter is bounded by the squamosal bone above and behind, by the quadrate bone below and in front. Into the former the supra-occipital enters, above; the quadrate, and, to a slight extent, the basi-occipital and basisphenoid below. To the posterior wall of the inner division, that outward and backward prolongation of the ex-occipital, which answers to the opisthotic of the turtle, contributes, while the front wall is formed partly by the quadrate and partly by the pro-otic bones.

Externally the tympanum opens by the external auditory meatus—its internal wall is formed chiefly by the pro-otic, opisthotic, and epiotic. The two latter are, as I have already stated, anchylosed respectively with the ex-occipital and the supra-occipital.

Each tympanic cavity communicates with its fellow of the opposite side, superiorly, by a wide passage, which perforates the supra-occipital bone and has a secondary diverticulum traversing the ex-occipital. Below, the tympana communicate with one another indirectly, by means of the common median Eustachian tube, the aperture of which, formed, half by the basisphenoid and half by the basi-occipital, is seen on the base of the skull behind the posterior nares. Each tympanum communicates with the common Eustachian tube by two passages; one, wide, from the posterior and inferior part of the tympanum, and one, very narrow, from its anterior and inferior region.

The two exits are separated by that part of the floor of the tympanum which is formed by the basisphenoid and basi-occipital. This presents, behind, a hemispherical fossa into which both the basisphenoid and basi-occipital enter, and, in front, a round aperture with raised edges, situated altogether in the basisphenoid. The fossa lodges the distal blind end of the cochlea. The aperture leads into a canal, which, passing downwards and forwards in the basisphenoid, opens into the pituitary fossa, and lodges the internal carotid.

The upper aperture of the anterior, narrow, passage from the tympanum is situated in front of the lip of the carotid canal, and, at first, lies between the basisphenoid and the pro-otic; but, soon turning inwards, it enters the basisphenoid, and passes beneath the carotid canal, to open into a much wider median channel. The latter ends blindly in front and above, behind and below the pituitary fossa; but, inferiorly, it traverses the substance of the basisphenoid, to open into the upper and front part of the common Eustachian tube.

The posterior, wide, passage leads downwards and inwards through the substance of the basi-occipital, and the two passages of the opposite tympana unite to form a short median canal, which opens, on the front face of the basi-occipital, into the common Eustachian tube.

The posterior tympanic passage has, however, another means of communication with the exterior; for, just before it joins with its fellow, it gives off, downwards, a narrow canal, which traverses the basi-occipital, and opens on its inferior face to the outer side of, and a little behind, the aperture of the common Eustachian tube. There might, then, be said to be three Eustachian tubes in the Crocodile,—two small and lateral, one for each tympanum, and one large and median common to both tympana.

Where the posterior tympanic passage passes into the tympanum, the ex-occipital presents a round aperture with raised edges, which is the anterior termination of the posterior division of the canal for the internal carotid. In the interval between this aperture of entrance and that of exit already described, the internal carotid is unprotected by bone, and is closely adherent to the outer surface of the cochlea; which, held by the cochlear hook already described, rests inferiorly upon the fossa afforded by the basisphenoid and basi-occipital.

The posterior wall of the tympanum also exhibits, internally, the aperture by which the eighth pair of nerves reaches the exterior; externally, those by which the portio dura leaves, and the external carotid enters; superiorly, between the supra-occipital and the squamosal, is a cleft which leads to the occipital surface in the dry skull.

VII.—*The Skulls of Mammalia.*

We have met with no important difficulties in the way of identifying the bones of the Bird's skull with those found in the skulls of the *Reptilia* and still lower *Vertebrata*, and hence, if the cranium of a Mammal be compared with that of a Bird, the bones which correspond in the two will obviously be homologous throughout the series.

The accompanying figure represents a longitudinal and vertical section of the skull of a Beaver (*Castor fiber*), drawn of the same absolute length as the section of the Ostrich's skull (Fig. 41), and exhibiting a corresponding extent of the cranium. The three segments of the basi-cranial axis are at once recognisable and identifiable with the basi-occipital, basisphenoid, and presphenoid of the Bird; but the basisphenoid is truncated at its anterior end, as in the Crocodile, not produced into a long beak as in Birds and many Lizards. The ex-occipital and supra-occipital bones again have all the relations of those of the Ostrich, and are universally admitted to be the homologues of the latter.

Fig. 50.

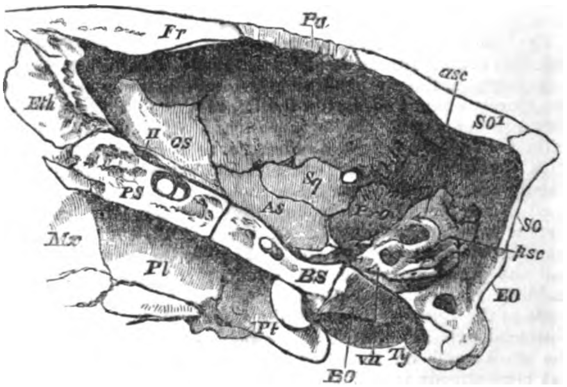

Fig. 50.—Longitudinal and vertical section of the cranial cavity of a Beaver.

In the Ostrich, as we have seen (Fig. 41), there lies in front of the ex-occipitals a large bony mass, composed of the confluent opisthotic, epiotic, and pro-otic bones. The inner face of the single periotic bone thus formed is divided into two surfaces, one anterior and one posterior, by a ridge which runs somewhat obliquely from above downwards and forwards. The anterior surface is concave, looks somewhat forwards, articulates in front with the alisphenoid, and contains no part of the organ of hearing; the third division of the trigeminal nerve passes out in front of it. The posterior surface presents, inferiorly, the apertures for the *portio dura* and the *portio mollis*; superiorly and in front, a fossa arched over by the anterior vertical semicircular canal; while superiorly and behind it contains the posterior vertical semicircular canal. Between the posterior edge of this division of the bone and the ex-occipital the eighth pair leaves the skull.

In the Beaver there is a single mass of bone not dissimilar in form and proportional size, which has always been admitted to be the homologue of the *pars petrosa* and *pars mastoidea* of Man, and the general relations and characters of which may be described in exactly the same terms. The inner face is divided into two surfaces, one anterior and one posterior, by a ridge which runs, somewhat obliquely, from above downwards and forwards. The anterior surface is concave, and looks slightly forwards, articulates in front with a bone which, as all agree, corresponds with the alisphenoid of Man, and lies behind the exit of the third division of the trigeminal. The posterior division presents, inferiorly, the apertures for the *portio dura* and *portio mollis*; superiorly and in front, a fossa arched over by the anterior vertical semicircular canal; while superiorly and behind it contains the posterior vertical semicircular canal. Between the hinder edge of this division and the ex-occipital the eighth pair leaves the skull.

The inferior or internal edge of the periotic bone in the Bird, and that of the *pars petrosa* in the other, comes into relation with the basi-occipital and basisphenoid; externally, each exhibits the *fenestra ovalis* and *rotunda*, and is related, above, to the squamosal.

In fact, the only noteworthy differences between the ornithic periotic, and the Mammalian *pars petrosa* and *mastoidea* are that the former becomes anchylosed with the adjacent bones of the cranial wall, while the latter remain separate; and that, while the periotic articulates with the parietal above in the Bird, the corresponding ossification in the Mammal is separated from that bone by the squamosal.

(a) These were first carefully described by Professor Owen in a memoir published in the *Philosophical Transactions* for 1850. Windischmann, "De Penitiori auris in Amphibiis Structura," (1831), has given but a very imperfect account of them.

(b) The cut Fig. 49 will appear in the next part of these Lectures.

On the former distinction it would of course be absurd to lay any weight; as regards the latter, it is deprived of all significance by the circumstances that in some Birds, as, *e.g.*, the common fowl, the squamosal interposes between the periotic and the parietal in the wall of the skull; and that in some Mammals, as, *e.g.*, the sheep, the squamosal is completely excluded from the skull, and the *pars petrosa* unites with the parietal.

The simple anatomical comparison of the parts appear to me, then, to be amply sufficient to demonstrate that the *pars petrosa* and *mastoidea* of the Beaver correspond in every essential respect with the periotic mass of the Bird, and therefore with the pro-otic, opisthotic, and epiotic bones of Reptiles and Fishes. On the other hand, no one has ever doubted that the petrosal and mastoid of the Beaver answer to the petrosal and mastoid of Man; and therefore we are led by the comparison of adult structure, merely, to exactly the same conclusion as that at which we arrived by the study of development, to wit, that the *pars petrosa* and *pars mastoidea* of Man answer to the periotic bones of the lower vertebrates.

In front of the periotic the side wall of the cranium is formed by an alisphenoid, anchylosed below with the basisphenoid; and, still more anteriorly, by a large orbito-sphenoid, united inferiorly with the presphenoid, which is distinct from the basisphenoid behind, and from the ethmoid in front.

FIG. 51.

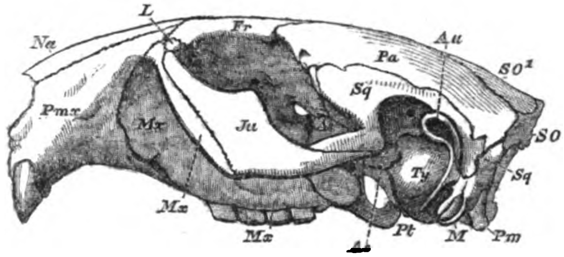

FIG. 51.—Side view of the skull of a Beaver.

In the roof of the skull a large interparietal *SO'*, which corresponds with the upper part of the *squama occipitis* of Man, occupies an interval left, posteriorly, between the two parietals; otherwise, the bones correspond with those found in the roof of the skull of the Bird. The ethmoid, the vomer, the nasal bones, the premaxillæ, maxillæ, lachrymal, jugal, and squamosal bones, the palatines, and the pterygoids of the Rodent, present no difficulties to the student acquainted with the structure of the Bird's and Reptile's skull, but he will miss the prefrontals, the post-frontals, the quadrato-jugal, the transverse, and the quadrate bones, together with all the pieces of the lower jaw, save the dentary.

The post-frontals, the quadrato-jugal, the transverse, and four out of the five missing pieces of each ramus of the lower jaw appear to have no representatives in the Mammalian skull.

The prefrontals, on the other hand, are represented by the so-called "lateral masses of the ethmoid," with their developments, the superior and middle ethmoidal turbinal bones, which answer precisely to those of Man. A third turbinal, developed from the primitive cartilaginous wall of the olfactory chamber, eventually becomes united with the maxilla, and answers to the inferior or maxillary turbinal of Man, while, in the Beaver, there is a fourth turbinal, connected with the superior turbinal and with the nasal bones, which may be termed the "nasal turbinal."

How far these well-defined turbinals of the Mammal answer to the cartilaginous and osseous turbinals of Birds and Reptiles is a question which has yet to be elucidated.

I have already endeavoured to show that the quadrate and articular bones of the oviparous *Vertebrata* are represented by the *incus* and *malleus* of Man, and consequently by the corresponding bones in all *Mammalia*; and that, as a consequence of the appropriation of two bones of the mandibular series to the uses of the organ of hearing, the dentary bone develops its own condyle, and articulates with the squamosal.

Another bone which appears to have no distinct representative in oviparous vertebrates is very conspicuous in most Mammals, and far more so in the Beaver than in Man. This is the tympanic element, and it will be useful to study with especial attention the characters of this bone, its relations to the periotic, and the manner in which both are connected with the other bones of the skull.

In a transverse section of the conjoined tympanic and periotic bones, taken through the canal which is common to the anterior and posterior vertical semicircular canals (Fig. 52), the periotic mass is seen to be prolonged, external to and below, the horizontal semicircular canal, and that for the passage of the portio dura, into a stout "mastoid process," which appears upon the outer surface of the skull, between the ex-occipital, the squamosal, and the tympanic, as a production downwards and outwards of the "*pars mastoidea*," which is doubtless, as in Man, composed partly of the pro-otic and partly of the epiotic and opisthotic bones.

FIG. 52.

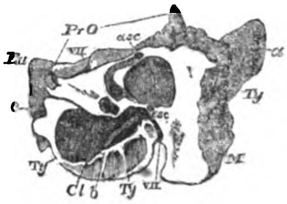

FIG. 52.—A vertical section of the conjoined tympanic and periotic bones of the Beaver (*Castor fiber*). *a*, external auditory meatus; *b*, groove for the tympanic membrane; *c*, the inner lip of the tympanic; *Eu*, Eustachian tube; *Cl*, cochlea; *M*, *pars mastoidea*.

The tympanic bone is produced externally into a spout-like tube, directed forwards and upwards, which is the external auditory meatus; below and internally the tube dilates into a thin walled hemispherical *bulla*, (*b*,*c*) open superiorly, and produced in front and anteriorly into a perforated process, which contains the osseous part of the Eustachian tube. The outer lip of the *bulla* and the auditory meatus are anchylosed with that region of the pro-otic which corresponds with the *tegmen tympani* in Man. The inner lip of the tympanic *bulla* is, as is the case with the corresponding edge of the tympanic bone of Man, applied against the opisthotic, but it does not anchylose with this bone in the Beaver; at any rate, for the greater part of its extent. Consequently, a very thin cleft or fissure, leading into the tympanum, is opened up, if the inner lip of the *bulla* is gently prised away from the periotic mass in this region. I shall term this the "*tympano-periotic fissure*." The great difference between the tympanic bones of Man and the Beaver arises from this circumstance, that in Man by far the greater part of the tympanic bone is occupied by the external auditory meatus—the interval between the groove for the attachment of the tympanic membrane and the inner edge of the tympanic bone—which forms the floor of the tympanum, being quite insignificant, except in the region of the Eustachian tube. In the Beaver, on the other hand, this part of the tympanic bone is greatly enlarged, and forms more than the inner half of the *bulla tympani*.

The tympanic bone and the periotic being thus anchylosed together externally (though only coadjusted internally), form one bone in the adult Beaver. But this "*tympano-periotic bone*" is not anchylosed with any of the adjacent bones, even the squamosal remaining perfectly distinct. Nor, indeed, is it fixed to them by very firmly interlocking sutures, so that in the dry skull it may be pushed out without difficulty. It is held in place, in fact, only by the descending post-auditory process of the squamosal (answering to the posterior part of the *margo tympanicus*), which curves behind the external auditory passage; and by the fitting in of the "*pars mastoidea*" between the ex-occipital and supra-occipital.

(To be continued.)

HEALTH OF SCOTLAND.—The Registrar-General's monthly report on the eight principal towns of Scotland shows that the deaths last month considerably exceeded the deaths in the October of any year since the commencement of registration, in 1855. The zymotic (epidemic and contagious) class of diseases proved fatal to 850 persons in the eight towns, constituting the very high proportion of 39 per cent. of the deaths. Typhus (including gastric) fever caused 129 deaths, but scarlatina was by far the most fatal epidemic. In Glasgow 22·8 per cent. of all the deaths were from scarlatina, and in Dundee 30·5 per cent. Of the 354 persons carried off by scarlatina only four were adults above twenty. The weather of the month was for the most part rude, boisterous, and inclement, the number of days with rain large beyond example, but the depth of rain fallen not quite equal to the average.

CHEMICAL AIDS TO THE MEDICAL PRACTITIONER.

By ROBERT DUNDAS THOMSON, M.D.,
F.R.S.S. L. & E., etc.

No. V.

MILK.

Milk the Type of Human Nutriment—Variation in the Specific Gravity of Milk in Different Portions of the Same Milking, and after Standing—Important Practical Deductions—Skim Milk—Common mode of Adulterating Milk—Mode of Adulterating Milk by adding Water—Amount of Cream in Milk—Method of Estimating the quantity of Curd, Albumen, Sugar, and Butter in Milk—Estimation of Lactose by the Tartro-Sulphate of Copper Solution—Mode of Preparing the Solution—Determination of the Salts of Milk—Relation of Soluble to Insoluble Salts—Estimation of Chlorine by a Standard Solution of Nitrate of Silver—Analogy of Milk and Wheat in their Chemical Composition.

So far as we know, Dr. Prout was the first who recognised the fact that the proximate constituents as associated in milk form the type of human food. Beccaria had, in the early part of the last century, affirmed, no doubt, that animals are composed of the same materials as form their nourishment, but Dr. Prout distinctly pointed out the fact that in all proper nutritious food the analogues of the constituents of milk ought to be present, either in the form of the substances themselves, or their representatives, viz., a nitrogenous substance (casein), a saccharine body (sugar), and an oleaginous constituent (butter). It is only surprising that what appears to us now such an obvious conclusion, should date from so recent a period. That a fluid supplied by Nature for the sustenance of the infant Mammalia should be so chemically arranged as to have its proximate principles definitely related to each other, might have been anticipated; but it was Dr. Prout who first directed our attention to the proper consideration of the rational analysis of articles of food, and gained for himself the title of the father of animal chemistry. There are several circumstances connected with the natural history of milk which require to be understood before giving an opinion with certainty as to its being genuine or adulterated, even after a careful analysis has been made, and these we shall endeavour briefly to allude to. Milk, when examined under the microscope, appears as a clear fluid, in which white globules are suspended. These are only partially soluble in ether, from which it is inferred that they are not composed of pure butter, but that they are accompanied with an investing membrane. Milk may therefore be considered as a serum through which milk globules are copiously diffused. In examining milk it is necessary not to be satisfied with its partial abstraction from the gland in which it is contained, since it has been long known that the first portion drawn differs in composition from subsequent portions. In 1788, the Royal Academy of Medicine in Paris offered a prize for a paper on milk, which was gained by MM. Parmentier and Deyeux, Members of the Institute (*Ann. de Chem.*, xxxii., 55—1800). In their book, published in 1799, the following passage occurs (ib. 59):—"It is an important observation that the milk of the same milking, and divided into several parts, presents in all mammiferous females notable differences in the quality and proportion of the products; that the milk first drawn is constantly the most serous, while the last approaches the state of cream; so that, in dividing the milking into three parts, the third and last portion contains three times as much cream as the first, and consequently more butter," and they add the practical remark that advantage may be taken of this fact in domestic economy by using the milk first drawn as milk or for cheese, and in appropriating the last portion of the milking for cream, cream cheese, or butter. They add that the most serous milk first drawn is often set aside less on this account than because it has often a disagreeable odour, which the remainder of the milking does not possess, especially when the cows are fed with cabbage, etc. (choux, etc.) The main facts have been subsequently confirmed by Peligot, Reiset, Knobloch, Heynsius, etc. In addition to the considerations resulting from the preceding circumstances, it deserves to be known that the composition of milk differs at different periods of the day. I have found, likewise, that the quantity of milk varies very considerably morning and evening in certain cows. In a young, irritable, or five-year-old cow, weighing 907¼ lbs., the quantities were as follows when fed on grass:—

	Milk every twelve hours by weight.			By measure.
	lbs.	oz.	drs.	gallons.
June 5th, morning . .	14	6	3	1·43
,, ,, evening . .	14	13	10	1·45
,, 6th, morning . .	14	3	8	1·38
,, ,, evening . .	15	6	8	1·50
,, 7th, morning . .	14	5	9	1·40
,, ,, evening . .	14	14	0	1·45
,, 8th, morning . .	14	14	5	1·46
,, ,, evening . .	13	3	4	1·32
,, 9th, morning . .	14	2	0	1·38
,, ,, evening . .	14	14	4	1·45

Another more quiet animal, six years old, weighing 1046 lbs., yielded under the same regimen the following results:—

	Milk by weight.			By measure.
	lbs.	oz.	drs.	Gallons.
June 5th, morning . .	12	12	10	1·28
,, ,, evening . .	11	12	4	1·15
,, 6th, morning . .	11	9	10	1·13
,, ,, evening . .	11	11	15	1·15
,, 7th, morning . .	11	14	6	1·165
,, ,, evening . .	11	13	11	1·165
,, 8th, morning . .	11	13	15	1·175
,, ,, evening . .	11	0	1	1·070
,, 9th, morning . .	11	6	0	1·11
,, ,, evening . .	12	10	10	1·13

In these tables it will be observed that the weights and measures do not always correspond on different days. Thus, in the last table on the 7th the milk measures the same morning and evening, but the weight differs, thus showing that the water in the evening predominated more than in the morning. We likewise observe that the quantities of milk vary much in different animals; and further extended series of experiments prove that the nature of the food has a powerful influence in increasing or diminishing the solids of the milk. Thus, I found 100 lbs. of dry grass produced 11·6 lbs. of dry milk and 2·71 lbs. of butter; 100 lbs. of hay, barley, and molasses gave 8·06 lbs. dry milk and 2·19 lbs. butter; 100 lbs. hay and linseed yielded 8·45 lbs. dry milk and 2·15 lbs. butter; while 100 lbs. hay and bean meal afforded 8·13 lbs. dry milk and 2·25 lbs. butter.

Specific Gravity of Milk.—There is a considerable variation in the density of different samples of milk, irrespective of the question of adulteration. The accuracy of the mode of making the experiment is the first consideration. If taken by the bottle, which is the most accurate method, not less than two cubic inches should be employed. When a hydrometer is used its accuracy should be carefully inquired into by placing it in distilled water at 60°, and in other fluids of known specific gravity, so as to test the accuracy of the graduation of the scale. The temperature of the milk when the density is taken should not be neglected. Thus I have found milk while milking to have a specific gravity of ·1027 at 90·5, and another sample 1032 under the same conditions, with a heat of 85°, while on subsiding to 72° the density rose to 1036. Another specimen had a specific gravity of 1030 at 86°, and at 60° the density rose to 1036. It is therefore very difficult to decide as to the exact density of milk. Since, if taken when newly drawn from the cow, it will be much lighter in consequence of the high temperature than it ought to be at the standard to which all fluids are referred. The true method of taking the density would be to take a sample of the entire quantity of milk derived from a cow at one milking, and cool it down by ice or freezing mixtures to 60°, and then finish the experiment. If we purchase a specimen of milk and carry it to some distance, and then allow it to stand, the cream will partially separate, and thus the milk will appear to have a higher specific gravity than it really possesses. A cow which I had at pasture yielded upon an average eleven quarts of milk daily, and afforded the following specific gravities four hours after being drawn from the cow. I have given a partial second column showing the specific gravity of the same milk when skimmed.

	Milk 4 hours after milking.	The same skimmed.
Aug. 29th . .	1037·5	
30th . .	1037·5	
Sept. 2nd . . .	1032	1039
3rd . . .	1034	1039·9

	Milk 4 hours after milking.		The same skimmed.	
Sept. 5th . . .	1037		1040	
6th . . .	1034		1044	
8th—Morning .	1035		1040	
Evening .	1033		1039	
9th . . .	1035		1040	
10th—Morning .	1036		1040	
Evening .	1028		1040	
11th—Morning .	1035		1037	
Evening .	1032		1040	
12th—Evening .	1030			
13th—Evening .	1028			
14th—Evening .	1032			
16th . . .	1032			
17th . . .	1027	90·°5		While milking.
18th . . .	1028	86°		
19th . . .	1029	85°		
21st—Evening .	1032	85°		
	1036	72°		In 4½ hours.
	1037	65°		
	1040	58°		Next morning.
22nd. . . .	1030	86°		
23rd. . . .	1030	86°		While milking.
	1036	60°		Three hours after.
	1040	59°		Next morning.
	1035	69°		Same with temperature raised.

This table is calculated to show the cause of the extraordinary statements which we find in books respecting the varying density of milk, depending on the period at which the milk is examined after milking. This table likewise enables us to understand how easy it is for the milk-dealer to sophisticate milk which is to be used immediately after purchase, and which is not to be reserved for the extraction of the cream if we are contented with judging of its purity or adulteration simply by taking its specific gravity. For example, I found that the last milk in the above table, derived from the cow on the 23rd, when it was heated up to 69°, had a specific gravity of 1035; and, when mixed with one-fourth its volume of water, yielded a mixture having a density of 1027—a condition in which we often meet with it in London, while, when one-half of its bulk of water was added, the density became 1021. Samples of milk prepared by such a formula I frequently meet in London. This we find to be the most common kind of adulteration, which cannot, therefore, be detected by merely taking the specific gravity. The amount of cream must also be ascertained.

Determination of the amount of Cream.—Cream rises most rapidly when milk is deposited in a shallow vessel. Hence in dairies such vessels are usually employed as allow the milk to detain as small a portion as possible of the cream. But in analysing milk we are under the necessity of employing a tube of considerable depth in order to determine the amount of cream contained in it. Any well graduated tube will answer our purpose. The common tubes employed for measuring gases for organic analysis, when divided into either cubic inches or cubic centimetres, may be used, or we may employ our septem volumeter. To have a check upon our determination it is advantageous to fill two tubes and deposit them side by side. If we use 50 septems of genuine milk we shall find that in twelve hours about five of the upper divisions are occupied by cream, the amount of cream in good milk being seldom less than 10 per cent. The quantity of cream contained in a gallon of milk will therefore be 1000 septems, equal in bulk to 7000 grs., or one pound of water. The weight can be found by taking the specific gravity of the cream, and by the proportion. As the specific gravity of water is to the specific gravity of cream, so is 7000 grains to the weight of an equivalent volume of cream. But the density of the cream will vary very much according as it rises from a shallow or deep stratum, or according to the character of the milk.

Determination of the Water in Milk.—The amount of water in milk is ascertained by evaporating the milk at a temperature of 212°, and never higher than 250°, a heat to which animal substances can be exposed without charring. It is better to employ a steam heat, if time can be allowed, for this purpose. And the residue is to be exposed to this temperature and weighed from time to time, until it ceases to lose any more of its weight. Two samples of milk were dried in this way, and the results were found to be as annexed. No. 1 was milk purchased in London from a well-conducted cow-yard, where the food is usually, at this season of the year, mangel wurzel. The specimen No. 2 was obtained on the same day from the neighbourhood of Hampton-court, on the Surrey side of the river. The amount used was 2000 grs in each case, the food being part pasture in No. II.

No. I. A.

London Milk. Specific Gravity, 1029·.

	Grains.	Grains.
Basin and milk	2718·93	2000
Basin	718·93	
,, and residue after 5 hours 212°	980·30	1738·63
,, ,, 3 additional	948 30	1770·63
,, ,, 2 ,, ,,	931·50	1787·43
,, ,, 1 ,, ,,	915·50	1803·43
,, ,, 2 ,, ,,	907·00	1811·93
,, ,, 2 ,, ,,	906·80	1812·13

A second experiment (B), conducted on 500 grs. after three weighings during seven hours, yielded approximate results. It is not safe to trust to experiments on a too reduced rate, unless after great experience, and a check should always be adopted in the instance of suspected adulteration where the character of a tradesman is concerned. In 1000 grains, or parts, the two experiments were as follows:—

	A.	B.
Water . . .	906·06	910·60
Solid residue . .	93·94	89·40
	1000·00	1000·00

Usually the greater confidence would be placed on the larger experiment, since an error in the smaller trial would be doubled in the statement as given.

In the experiment upon the country milk (No. II.) the results were as follows on 2000 grs.:—

No. II.

Country Milk. Specific Gravity, 1030·.

Basin and milk . .	2963·3	2000 grs.
Basin	963·3	
,, and residue 5 hrs. 212°	1219·3	1744·0
,, ,, 3 additional	1202·	1761·3
,, ,, 2 ,, ,,	1193·	1770·3
,, ,, 1 ,, ,,	1181·5	1781·8
,, ,, 2 ,, ,,	1181·4	1781·9 = 890·95 per 1000.

The precise details of the experiments afford the most definite information with reference to the reasons for discontinuing further the process of dehydration. The composition of the milk therefore, in order to be comparable with the preceding table, would be—

Water	890·95
Solid residue	109·05
	1000·00

The mean amount of water in good milk bears a considerable range. Thus, I have found it in cows fed under my own eye, 872 per 1000, and 873·5; while the mean of French milk gives 883·6. This would approach pretty nearly to the quantity in the second sample, which was of an undoubted genuine character. It will be observed in the two experiments with the first sample, the water was greater with the small specimen than with the larger, as the butter resists the escape of the aqueous vapour. The difference is, however, less than half a per cent. Between the first and second samples there is a difference of 2 per cent in the amount against the town milk. It would scarcely, in presence of the facts respecting the variability of milk, be justifiable to pronounce the town milk adulterated.

Determination of the Butter.—The residue remaining after the evaporation of the water is to be exhausted by ether, which dissolves the butter, and may take up a portion of saline matter. The ethereal solution is placed in a porcelain capsule, the ether distilled off, the butter fused and weighed, and then burned, when the saline matter extracted will remain. This amount must be deducted from the original weight of the butter. Another method is to take a separate portion of fresh milk, to add one-fifth of gypsum dried at 212°, which coagulates the casein, and renders it less soluble in water, furnishing a mass which can be pulverised and more readily exhausted by ether. Ether dissolves the butter (Haidlen). A third method of separating butter is to saturate the milk with common salt. A perfectly limpid serum is thus produced, containing all the soluble casein and the salts. The butter alone is detained by a weighed filter (Dumas). A fourth mode of separating the butter is to add to the milk four times its weight of acetic acid, diluted with an equal volume of water; on filtration the butter alone remains upon the filter (Doyere).

Determination of the Casein.—When the curd has been coagulated by gypsum, as above, and the butter removed by ether, and the sugar and the soluble salts by weak alcohol (·85 sp. gr.), the remaining organic matter is casein and a small portion of albumen. Another method is to add to milk one-fiftieth of its volume of acetic acid, which coagulates the casein, and produces whey. On filtering and evaporating the whey at 212° to 240°, we obtain the total solids of the milk, less the casein.

Determination of the Albumen.—To whey is added twice its volume of alcohol; the precipitated albumen is filtered and dried at 240°.

Determination of the Lactose, or Milk-sugar ($C_{21}H_{24}O_{24}$).—The preceding fluid, after the separation of the albumen, leaves, on evaporation, the lactose with a small quantity of salts, the amount of which is ascertained by incineration.

It is convenient to be able to ascertain the amount of sugar of milk in a sample of milk by a direct and speedy experiment. This may be effected by means of a solution of sulphate of copper and caustic potash or soda. On coming in contact with sugar two atoms of protoxide, or black oxide of copper are deprived of one atom of oxygen, and the red dinoxide is produced. In the case of grape sugar the action is 2 (CuO,SO_3) $C_{12}H_{12}O_{12}$,NaO = Cu_2O, 2 ($NaOSO_3$), $C_{12}H_{12}O_{13}$. It has been found that one atom of glycose decomposes ten atoms of sulphate of copper. The composition of grape sugar, sugar of milk, and blue vitriol are as follows:—

	Grape Sugar.		Lactose, or Sugar of Milk.	
Carbon	12 atoms =	72	24 atoms =	144
Hydrogen	12 ,,	12	24 ,,	24
Oxygen	12 ,,	96	24 ,,	192
		180		360

Sulphate of copper:—

1 atom	Sulphuric acid	SO_3	40
1 ,,	Oxide of copper	CuO	39·7
5 ,,	Water	HO	45
			124·7

Experiments have shown that 180 grains of grape sugar (glucose) will decompose 1247 grains, or 10 atoms of blue vitriol (Fehling, Liebig's *Annalen der Chemie*, lxxii., 109, 1849).

Preparation of the Tartro-Sulphate of Copper Standard Solution.—Dissolve 124·7 grains of sulphate of copper in 400 septems of distilled water. Second. Dissolve 405 grains caustic soda, and 490 grains neutral tartrate of potash in 400 septems of distilled water. Mix the two solutions; make the combined mixture up to 1000 septems, and preserve for use in a stoppered bottle.

To determine the amount of lactose which this solution is capable of decomposing some pure sugar of milk should be obtained, and five grains dissolved in water. On the addition of the copper solution from the septem volumeter, a brown or red colour is produced, and the blue colour disappears. The test liquor is added until the supernatant fluid in the milk sugar solution is faintly blue, and yields no further appearance of decomposition. To prepare the milk for the action of this test liquor, take 100 septems of milk or any convenient quantity, add to it a few drops of sulphuric acid, heat up to about 120°, and filter. The casein and butter remain on the filter, while the sugar and salts pass through in the whey. 1000 grains of milk yield about 923 of whey. The test liquor is then to be dropped into the whey, as previously described. 1000 grains of genuine milk will be found to contain about 52·6 to 50 of sugar. This affords a rapid method of determining whether a sample consists of diluted skim-milk. Milk frequently sold contains 35 per 1000 of milk sugar, and in such cases we conclude, without the slightest hesitation, that the cream has been almost entirely abstracted from the milk.

Determination of the Saline Constituents of Milk.—After the evaporation of the water from milk the saline matter may be determined by incinerating the residue in a platinum capsule. The extract of milk readily parts with all its carbon, so that no oxidising agent is required to facilitate the combustion; the mean amount of total ash I have found to range from 5·9 to 6·93 per 1000. In German milk the quantity is stated to range from 4·9 to 6·77 (Haidlen); some French experiments raise the mean to 7· (Doyere). In the specimens of London milk No. 1, and Hampton-court milk No. 2, the ash weighed respectively 12·6 and 13·86 in 2000 grains, which is equivalent to 6·3 and 6·93 in 1000 parts. The relation of the soluble to the insoluble salts is a matter of some consideration, as showing whether either soluble or insoluble saline matter has been artificially added. The following table shows this:—

	No. 1.	No. 2.	German (Haidlen) milk.
Salts per 1000 parts . . .	6·300	6·93	6·77
Amount of insoluble salts . .	4·195	4·26	4·15
,, soluble salts . .	2·105	2·67	2·62
Ratio of soluble to insoluble salts	1 to 1·9	1 to 1·6	1 to 1·5

The town milk therefore presents a discrepancy when compared with the country and German milk—the two latter closely corresponding, although there is no reason to infer that No. 1 was at all adulterated; the insoluble portion consists of phosphate of lime, phosphate of magnesia, and phosphate of iron; while the soluble salts are composed of soda united previously to organic matter and chlorides of sodium and potassium. The determination of the chlorine alone is a check upon the adulteration of milk after determining the water, organic matter, and salts. The soluble salts are divided into two portions—one of these is reserved for the determination of the chlorine, which may be accomplished by a standard solution of nitrate of silver.

Preparation of a Standard Solution of Nitrate of Silver.—Nitrate of silver is prepared by dissolving pure silver in pure nitric acid somewhat diluted, and evaporating to dryness in a porcelain basin. To make the standard solution, a portion of pure nitrate of silver is fused at a low red heat in a porcelain crucible. 170 grs. (1 atom) of the fused salt are dissolved in 1000 septems, or 1lb. of distilled water. This solution will stand thus:—

1000 septems of water will contain 170 grains nitrate of silver, which correspond to 35·5 grains chlorine.

The volumeter being filled up to 100 septems, the fluid is to be dropped gradually into one of the portions of solution of soluble salts, which is previously to be boiled and mixed with a few drops of pure nitric acid. After each addition of the standard solution, the mixed fluids are to be briskly stirred with a rod to collect the chloride into curds, or, better still, a flask may be used for the chloride solution, and can be well shaken. The nitrate solution is to be added till the liquid no longer becomes turbid. The amount used is to be read off on the volumeter, and its corresponding quantity of chlorine calculated. As a check, the chloride of silver may be filtered, washed, and fused in a porcelain crucible, and weighed.

In the preceding samples the experiments stood—

	In 1000 grains of Milk.	
	No. 1.	No. 2.
Chloride of silver	2·91	3·64
No. of septems of solution of $AgONO_5$	20	25
Amount of corresponding Cl . .	·72 grs.	·90 grs.

The second portion of soluble salts is neutralised with chlorohydric acid and evaporated to dryness, heated to low redness in a porcelain crucible, and weighed. The residue consists of chlorides of potassium and sodium. The chloride of potassium is separated by bichloride of potassium, as previously described (Paper III.). To distinguish the free soda from that which is combined as common salt, we calculate what is required to saturate the potassium; the remainder is to be appropriated to the sodium, with which it was united in the milk, while the excess of soda is what was free before being neutralised by the chlorohydric acid as above. We may also calcine a separate portion of milk, and determine the amount of free soda in the soluble salts by the standard solution of oxalic acid (Paper II.).

The earthy phosphates (phosphates of lime, magnesia, and iron) are analysed by dissolving them in chlorohydric acid, the solution heated with sulphite of soda, to reduce the iron to the state of protoxide, the solution almost neutralised with carbonate of soda, an excess of acetate of soda and some drops of chlorohydric acid added, and the whole boiled; all the phosphoric acid separates in union with the iron. The solution contains the lime which is precipitated with oxalate of ammonia (Paper III.), and the magnesia, which is thrown down as ammonia phosphate of magnesia (ib.). The phosphate of iron is analysed by dissolving in chlorohydric acid, then adding tartaric acid, and neutralising with caustic ammonia. The iron is precipitated by sulphide of ammonium; the sulphide is filtered and washed with water containing sulphide of ammonium. It is converted into sesquioxide by nitric acid, and precipitated by caustic ammonia. By a carefully conducted analysis it will be found that milk will have the following composition on an average. For the sake of comparison the constitution of wheat is also given:—

	Milk.		Wheat.
Water	87·43	Water	140·00
Butter	37·00	Fat	12·00
Sugar	43·50	Starch	597·00
		Dextrine	72·00
Caseine Albumen	34·30	Casein Glutin Fibrin Albumen	146·00
Woody matter			17·00
Phosphate of lime Phosphate of magnesia	3·44 ·64		11·27
Phosphate of iron	·07	Peroxide of iron	·19
Chloride of potassium	1·83		·17
Chloride of sodium	·34		0·00
Soda	·45	Potash	4·37
	1000·00		1000·00

The identity of the analogy between milk and flour are clearly established by this comparative table.

ORIGINAL COMMUNICATIONS.

◆

OBSERVATIONS ON HAY FEVER, OR SUMMER CATARRH.

By W. ABBOTTS SMITH, M.D., M.R.C.P. Lond.,
Physician to the Metropolitan Free Hospital and to the Finsbury Dispensary, etc.

Having recently had under my notice several cases of this peculiar affection, of which I have also had repeated opportunities of observation in different rural districts, I venture to make a few remarks upon its nature and treatment.

Dr. Bostock, who was the earliest writer on hay fever (*vide Medico-Chirurgical Transactions* for 1828) to which he was himself subject for many years, succeeded in tracing its origin to the emanations given off from certain species of the Graminaceæ, and it has since been shown that hay, although it may have been collected for some weeks, may retain the property upon which hay fever depends sufficiently to admit of its producing the affection in persons who are susceptible of its attacks. In illustration of the occasional occurrence of this disorder in large towns from the latter cause, I may adduce the following case.

T. G., a young man of sound constitution, and usually enjoying good health, presented himself amongst the out-patients at the Metropolitan Free Hospital, in June, 1863, in consequence of his suffering from severe catarrhal symptoms, which were accompanied by intense frontal pain, headache, giddiness, lassitude, and prostration of strength. The patient had a harsh, dry cough, and he complained of a disagreeable sensation of itching and irritation in the fauces and trachea. The pulse was weak and rapid, averaging from eighty-five to ninety-five pulsations in a minute; the tongue was dry, and partially covered with a white fur; the urinary secretion of a high colour, and very scanty, and the bowels obstinately confined. Learning that the patient was in the employ of a hay salesman, I suspected the real nature of the case, and, on further inquiry, I elicited the important facts that he lived in a small house situated in a yard where large quantities of hay were stored, that the disorder could be traced back to a period at which some loads of very new hay had been brought to the yard from the country, and that the patient's wife was also suffering from symptoms similar to his own. I directed the patient to reside temporarily at a distance from the hay stores, to take a saline aperient draught every morning, and the ethereal tincture of lobelia, in drachm doses, four times a day; subsequently, the mixture was replaced by one containing quinine, with an excess of dilute sulphuric acid. The man soon recovered, and the same treatment proved equally efficacious in the case of his wife, who also came under my care.

Another case of hay fever, which I saw in the past summer, was that of a person residing near Barnet. I adopted the treatment which I had found useful in the preceding cases, with great relief to the patient, whom I also directed to suck a small piece of ice occasionally, in order to obviate the thirst and dryness of the throat. The symptoms in this case were unusually severe, the feeling of constriction of the chest being such as to make the patient dread imminent suffocation.

As a rule, I have observed that the worst cases are those in which, like the latter, the patient is affected in consequence of a residence near fields in which the grass is passing through the flowering state. The peculiar aroma of the grass at this period is due to the *Anthoxanthum odoratum* (sweet-scented vernal grass) and the *Holcus odoratus* (sweet-scented soft grass). It was ascertained some years since, by M. Vogel, that benzoic acid exists in both of these grasses, and that their aroma is due to its presence. This fact is interesting when considered in connexion with the circumstance, kindly communicated to me by Messrs. Davy, McMurdo, and Co., and corroborated by other practical authorities, that the inhalation of the vapour which accidentally escapes during the process of sublimation of benzoic acid causes considerable irritation of the throat and violent paroxysms of coughing. May not summer catarrh be, in some degree, attributed to the irritative effects of the benzoic acid which is liberated in minute particles from the *Anthoxanthum odoratum* and *Holcus odoratus*, by the agency of the summer heat? In support of this view, it may be stated that the attacks of hay fever are invariably worse during a continuance of hot, dry weather, and are of a milder character in wet weather, and when the temperature is much reduced. This exacerbation of the affection in hot weather also points to local vascular congestion of the naso-pulmonary mucous membrane as a probable predisposing cause of summer catarrh.

Females are more subject to hay fever than males; and the period of life at which it is most common is from fifteen to forty-five years of age; after this latter age, the tendency to an annual return of the affection gradually diminishes. In some instances the disorder occurs in several members of the same family. Dr. Bostock imagined that hay fever was almost entirely confined to the upper classes of society, but subsequent observations have demonstrated that no rank is exempt from its invasion. Its apparent greater prevalence amongst the better classes may be explained by certain accidental circumstances, such as the greater facilities which they have for undergoing Medical treatment, so that these cases are more likely to come under Professional observation.

In the treatment of hay fever, I have found only a limited degree of benefit to result from the administration of tartarised antimony, digitalis, and ipecacuanha, all of which have, at various times, been recommended. The remedies upon which most reliance can be placed are the ethereal tincture of lobelia, first suggested, I believe, by Mr. Gordon, of Welton, in doses of half-a-drachm to a drachm, every four or six hours, and quinine, combined with dilute sulphuric acid. A saline aperient—sulphate of magnesia being one of the best—should be occasionally given. The employment of ice, of which the patient is to dissolve small pieces in his mouth, at frequent intervals, will be found extremely beneficial in relieving the distressing thirst and dryness of the throat. Bathing in cold water daily, by means either of the shower-bath or the sponge-bath, is very useful in warding off the attacks of hay fever, or in diminishing their severity. The diet should be carefully regulated, and all indigestible food, especially vegetables, should be avoided. The removal of the patient beyond the reach of the cause of the affection greatly facilitates the cure, but in many cases this step would probably not be practicable.

Doughty-street, W.C.

The British Medical Association.—It will, no doubt, be a subject of great regret to the Fellows of the Royal College of Surgeons of England to learn that the petition from the above body to the Council of the College, earnestly requesting that Provincial Fellows may be allowed to vote by proxy for seats in the Council, has been rejected.

ON A CASE OF DEATH RESULTING FROM EATING FUNGI.

By JOHN TAYLOR, M.R.C.S.

The subjoined case formed the subject of a coroner's inquiry on the 23rd ult.:—

George Frederick I., aged 13, employed under a gardener in the neighbourhood, gathered some fungi growing beneath some trees, and on the morning of October 19 fried them (two in number) with some butter in an iron pan for his breakfast. About half-past eight a.m. he eat them, returned to his work at nine in good spirits, and making no complaint. About an hour and a-half afterwards he vomited, then continued his work. At twelve he went home to dinner, and eat a hearty meal of hot pork and vegetables. At one he returned to duty, where he remained till six, working the whole time without complaint. Soon after he arrived home he said he felt bad, went out in the street, and vomited violently. His mother then administered a dose of salts—a teaspoonful and a-half in some warm tea. Purging soon followed, accompanied by severe paroxysmal abdominal pain. These symptoms, vomiting, purging, and pain, continued throughout the night till six a.m. The bowels then ceased to act. In the morning I was sent for; about half-past eleven I saw him. He was then suffering constant pain in his bowels, aggravated at intervals, slight tenderness over the general surface of the abdomen, particularly over the course of the transverse colon, and vomiting every ten minutes, *great thirst*, surface warm and perspiring, pulse about 90, soft, and compressible, and he seemed somewhat depressed. I prescribed a mixture of potassæ bicarb., acid hydrocyan., tr. opii., and sp. ammon. co., flannels wrung out in hot mustard and water to abdomen, barley water for drink, and cold arrowroot with a little brandy in small quantities occasionally. To hear of him in the evening. His brother called at my house about seven, p.m., but left no report. At half-past two a.m. two brothers called me up, and requested me "to give some medicine to ease his pain, as he had not passed any water since the morning, and was constantly wanting to get out to relieve himself." Half an hour afterwards I received a message to say he was dying. In a few minutes I was at his bedside. I was told "his brother had assisted him out to the utensil, that he had made a croupy noise, and then fainted." He was now in bed, lying on his back, his knees drawn up. The vomiting, which had abated during the day, had returned, and he was again purged. He was now much exhausted, the pulse almost imperceptible at the wrist, and the action of the heart very feeble. His sensibility and consciousness, however, were perfect. He complained of great pain, especially above the pubes and at the epigastrium, extending thence to between his shoulders and up his chest. General tenderness, but no swelling of abdomen. Pins and needles in his feet and buttocks. I went home and prepared a stimulant. I saw him again in an hour. He was then dying, and expired soon after I entered the room.

Two other members of the family partook of the same fungi. One, not liking the flavour of them, chewed a small quantity, then spat it out, saying it tasted like raw meat; the other eat a small piece, and experienced a peculiar sensation about his throat, but was neither sick nor purged.

Post-mortem Thirty-six Hours after Death.—Chest—Heart: left ventricle contracted and empty; a little fluid blood in both auricles. Lungs healthy. Congestion of posterior borders from gravitation. Abdomen not distended; walls flat and flaccid; on inspection there were no signs of recent peritonitis. The general appearance of the stomach and small intestine was that of congestion, the vessels having a bluish red appearance through the transparent peritoneum. The lining membrane of the œsophagus was pale and healthy. The mucous membrane and submucous tissue of the stomach and small intestine throughout was injected, the bluish red appearance diminishing in intensity as it approached the cæcum. There were a few ecchymosed patches near the pyloric end of the stomach. The stomach contained about six ounces of dirty fluid, resembling thin gruel, having a garlicky odour. The mucous membrane throughout was entire. The large intestine empty and pale, contrasting strongly with the small. The spleen was congested, and fluid blood oozed from it on section. The liver was of large size, of a pale fawn colour, the ducts being loaded. Gall bladder full. The kidneys healthy. The bladder contained about half-an-ounce of urine.

Emsworth, October 26.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

ANEURISM OF THE ASCENDING AORTA BURSTING INTO THE LEFT PLEURA.

(Under the care of Dr. GOODFELLOW.)

[Reported by C. W. Pitt, Senior Resident Clinical Assistant.]

William F., aged 47, a cabinet-maker, was admitted into Founder Ward, almost in a dying state, on July 3, 1863.

He had fallen in the street from syncope, from which he had not recovered when admitted. There was great dyspnœa, which was increased by exertion; any attempt to lie down brought on symptoms of suffocation; the act of swallowing and the presence of food in the stomach increased the dyspnœa. There was a loud laryngeal rattle, but the voice was clear, strong, and free from huskiness; the larynx was not tender under pressure, nor was there any redness or swelling of the pharynx, but the inspiration was accompanied with a stridulous noise.

On inspection by Dr. Goodfellow, it was soon observed that the dyspnœa was not due to any inflammation of the larynx, nor to asthma, but to some interference with the function of the inferior laryngeal nerves.

On examining the chest, the following signs were observed:—Marked prominence of the ribs on the left side, and diminished movement during respiration, dulness over the whole of the lower part of this side of the chest, and deficient respiratory murmur and vocal resonance; while on the right side the respiration was puerile, and the percussion-resonance preternaturally clear. On the upper part of the chest there was a circumscribed prominence, extending from the left border of the first bone of the sternum to two and a-half inches to the left, and reaching downwards as far as the upper border of the third rib. Over this prominence, as well as on the first bone of the sternum, an evident, although not a strong, impulse could be detected, which was synchronous with the ventricular systole; no murmur was audible either over this pulsating tumour or over the base or apex of the heart, though there was absolute dulness over the situation of the tumour. The impulse of the heart was weak and distant. Pulse 84, small and weak at the wrist on both sides; weaker on the right than on the left side. No pulsation could be felt over the carotids on either side.

Diagnosis—Aneurism of the ascending aorta, pressing upon the left inferior laryngeal nerve, and effusion into the left chest.

During his three days' stay at the Hospital, he had alarming fits of dyspnœa, brought on sometimes by efforts at swallowing, at others by assuming, to some extent, the horizontal position whilst dozing.

On the evening of the third day after his admission he was unusually restless, and about 1 a.m. he suddenly started up, as if in great alarm, made a few gasps, and fell back dead.

His previous history tended to confirm the diagnosis. He had led an irregular life, frequently drinking, and indulging in sexual intercourse to excess. He had suffered for many years from stricture of the urethra, for which he occasionally was obliged to submit to the usual treatment, and he had some eruption on the skin, probably of a syphilitic origin. His general health continued pretty fair until fifteen to sixteen months ago, when he was first attacked with dyspnœa, which came on chiefly at night. Previously to the first attack of dyspnœa he had been drinking to excess. Another attack succeeded in the course of a week, accompanied by "stiffness and pain" in his head, after a similar bout of drinking, and on this occasion he felt a sudden stoppage of his breath, so that he was unable to move, and he had the "rattle" in his throat. He had a spasmodic cough all the time, but there was no expectoration. For this last attack he went into the St. Pancras Infirmary, where he remained a month, and at this time there was also difficulty of swallowing, and pain about the region of the heart. He, however, resumed work at the end of a month. Three months prior to admission he had another attack of dyspnœa, and one night he had hæmoptysis, and brought up a good deal of blood. Three or four days after this he expectorated some more blood, which was coagulated. He was never seized with syncope before the attack for which he was admitted.

Autopsy.—Body that of a well-made, muscular man; surface very pale. Left side of chest slightly more prominent than the right. On removing the sternum, the anterior mediastinum was found occupied by an aneurism, of an irregular oval form, about four and a-half inches from above downwards, and extending to the level of the sternal notch; the sac was in contact with the sternum, and adherent to its upper part, and opposite to its first bone was deficient, so that here the bone formed part of the wall of the sac, and was rough and hollowed out by a circular cavity, which extended nearly through its whole thickness. The left pleura was filled with loose, dark-coloured blood-clots and bloody serum, the whole weighing 7 lbs. The lung was pushed upwards and forwards; the whole of the lower lobe, and the anterior border of the upper, were completely collapsed and airless; the rest of the upper lobe was emphysematous; the anterior collapsed border was adherent to the aneurismal sac, and about two inches below, but in the middle this portion of lung was separated from it for a short space; here, however, the pleural surface of the border was coated with false membrane, which had evidently recently been torn from the aneurismal sac, for corresponding to this was an opening, partly obstructed by clots, which would admit the finger into the interior. The heart was pushed over to the right side. On opening the aneurism it was found to arise from the anterior surface of the ascending aorta, immediately upon its exit from the pericardium, and reaching to the commencement of the innominate artery. The walls were lined with coagulated fibrin, and in front were composed entirely of thickened pleura and cellular tissue, the arterial walls gradually thinning off, and ending by a tolerably well-defined margin. In the upper part of the tumour was a dense, firm, globular clot, which was partly contained in the hollow in the sternum, and composed of well-marked concentric layers of a yellow colour. The whole sac projected to the left side and upwards, in front of the innominate and left carotid arteries. The arterial wall at the line of reflection over the aneurism formed a fold, which, when the sac was distended, would tend to close these vessels in a valvular manner; the left subclavian, having its origin beyond, was not affected by this arrangement. The aorta was the seat of atheroma from its origin to above the aneurism. The end of the trachea and the left bronchus were in close contact with the tumour behind, but not adherent to it, and not narrowed in any way. There is no doubt, however, from the relation of the parts that the tumour must have pressed with considerable force upon these parts in certain positions. The heart was firmly contracted, and quite empty; valves healthy. Right lung very anæmic; in the apex of the left lung were a few cretified tubercular deposits. Liver-structure normal; weight, 50 oz.; right kidney, 6½ oz.; left, 7 oz.; both large, pale, and somewhat mottled; the capsule easily separable; under the microscope many of the tubes were filled with granular deposit and studded with oil globules.

Clinical Remarks by Dr. Goodfellow.—In reviewing the history of the case it does not seem clear at what precise period the aneurism first commenced. The probability is that it occurred during the stupor or excitement of intoxication, when the sensibility had been rendered obtuse by alcohol, and therefore any immediate effect upon the system passed unnoticed. Its commencement was probably anterior to the time when his general health became seriously impaired, namely, "fifteen or sixteen months prior to his admission, when he was first attacked with dyspnœa, which came on chiefly at night." At this time probably the aneurism had attained a considerable size, so as to embarrass to some extent the circulation, both systemic and pulmonary, and to interfere by its pressure with the parts immediately surrounding the sac, namely, the trachea, the primary bronchi, the œsophagus, and the inferior laryngeal, and perhaps the trunk of the vagus nerves. As the dyspnœa at that time was chiefly at night, it is probable that these nerves were not affected by the aneurismal tumour while the man was in the upright position, but on assuming the recumbent posture for repose the pressure upon these nerves, and consequent dyspnœa, occurred. This was found to be the case during his short stay in the Hospital. When he sat in the upright position, with his head and trunk bent forwards, but little difficulty of breathing or of swallowing was felt, but on attempting to lie down the difficulty of breathing became so great, accompanied by loud stridor, that he was obliged immediately to resume his former position. Towards the latter part of his illness the pressure of the aneurismal tumour upon the inferior laryngeal nerves was constant; not so great, however, as to paralyse them—for the voice remained clear and of good power, but of a higher pitch, to the last, so that he could even sing—but so to interfere with their function that the glottis was nearly always constricted, and the chink during inspiration rendered so small as to give rise to stridor. The same remark applies to the difficulty of swallowing from occasional pressure upon the trunk of the vagus. The spasmodic cough was partly due, probably, to the same cause. Pressure upon, or irritation of, the inferior laryngeal nerves undoubtedly excites spasmodic cough, while section of them completely destroys the power of vocalisation. Irritation of, and perhaps occasional pressure upon, the vagus produces contractions of the œsophagus. This has been witnessed by many experimenters, and in Dr. J. Reid's experiments these contractions were seen to extend throughout the whole tube to the cardia. The difficulty of breathing was doubtless partly owing to pressure upon the trachea, and also to reflex action. The immediate cause of the aneurism was probably inordinate action of the heart, and increased lateral pressure upon the arterial wall during one of his drunken bouts. He had never, so far as he recollected, lifted any heavy weight, or made any sudden and great exertion. If this had been the cause, he would have felt some change at the time of its occurrence. No faintness was at any time felt until that which occurred immediately before his admission. This attack of syncope was caused doubtless by the rupture of the artificial wall of the sac, and the discharge of so great a quantity of blood into the left pleural cavity. With regard to the diminution in the volume of the pulse at the wrists, this was easily explained by the situation of the aneurism. The cause of the absence of appreciable pulsation in the carotids was not so patent. It was only after a careful search that the cause was rendered evident, by the discovery of the peculiar valvular arrangement around the orifices of these vessels mentioned in the post-mortem report.

ST. GEORGE'S HOSPITAL.

SEVERE AND LONG-CONTINUED NERVOUS SYMPTOMS, CONNECTED WITH DISEASE OF THE BONES OF THE SKULL, PROBABLY OF SYPHILITIC ORIGIN, TREATED BY CALOMEL FUMIGATION.

(Under the care of Mr. LEE.)

M'S., aged 30, admitted November 27, sail-maker; married. He has had four children of the following ages:—Seventeen months; three and a-half years; six years; and seven years. He says, "they are as healthy as you would wish to see, not a spot or blemish on them."

Three years and a-half ago he had an attack of rheumatic fever, which occurred at Calcutta; until then he had always had good health. He states that he believes the fever to be the cause of his present suffering. He has an abscess rather above the occipital protuberance about the size of a florin, (at the hollow of which the bone is exposed and necrosed,) and he suffers from pain in all his limbs. He has pain from the shoulder down to the third and fourth fingers of the left hand, which pain makes all his fingers useless. There is a nervous jerking of the hand every three or four seconds, which is very perceptible when you feel his pulse. He has a slight swelling above the olecranon process of his left arm.

Three years since he had gonorrhœa. He says he has not been able to work more than eleven weeks since the rheumatic fever. A year and a-half ago he was in St. Mary's Hospital under Dr. Sibson for six weeks; and after an interval of two months from the time of his discharge on that occasion he was compelled to return to that Hospital, where he remained on the second occasion four weeks. About eight months ago he was employed at the Turkish Baths for four months, and attending there fourteen hours a-day, n a temperature of 150° to 160°. He then drank two pints of porter and a gallon of water every day. The above temperature, he says, was of much service to him. Two years and three months since there was a tumour where the abscess now exists, and that it continued swelling for three months before it suppurated; it has been as large as his hand, and the discharge of pus therefrom has been very considerable.

November 28.—Hyd. c. cretâ, gr. iij.; pulv. Doverii, gr. viij.; haust. sennæ, ℥iss. mane.

29th.—Has passed a miserable night; there was a draught given him at one o'clock at midnight, and he then lay as if he were dead. Bowels opened this morning. Constant pain down the back; this pain first came on not less than eighteen months since.

30th.—When Mr. H. Lee passed a probe into the abscess it gave him no pain; potassa iodidi, gr. iv.; inf. quassiæ, ℥iss. ter die; balneum hydr. chlorid. ʒss. quotidie. Pulv. Doveri, gr. xv., o. n.

December 2.—He is a little better, but he has had no sleep during the night. After two o'clock this morning was quite free from pain; at times feels quite worn out. Dozed since seven. Quite sick from breathing the vapour of the bath.

3rd.—Pain still, but not so bad as it was. Did not sleep till six o'clock this morning. Appetite improves wonderfully.

6th.—Better; appetite better; less pain; but he cannot lie on his left side more than half an hour before it begins to ache. Cannot sleep at night, although the pain has considerably left the abscess.

7th.—Very weak indeed, but not in pain. Pulv. Doveri, gr. x., o. n.

9th.—He is very much improving. Appetite now very good.

12th.—He says he is in pain, but his sides feel as if they had been squeezed. With difficulty he can walk the length of the ward. Bowels opened daily. He says that sometimes he could eat more than that which he is allowed.

16th.—Last night he had four or five hours sleep. Appetite very good. Complains of shooting pain in the left breast.

18th.—Previous to last night he says he has had two good nights' rest. He states he can put his finger nail under the outer table of the skull, and the discharge now is very trifling. So much improved that he can sit up a few hours at a time.

27th.—Complained of a "heavy, aching pain" in the back.

30th.—Some tenderness on pressure existed over the right parietal bone for a space as large as the palm of the hand.

January 2, 1863.—Gums sore from the action of the calomel bath. The wound in the head is now the size of a sixpence.

4th.—Wound is healing.

11th.—Wound healed; the pains have entirely ceased; motions of limbs perfect. In fact, feels himself well.

Mr. Henry Lee observed, in his clinical observations on this case, that it was one of several that had lately come under his notice, in which severe nervous affections had occurred in consequence of disease of some portions of the bones of the skull, and in which that disease had, as he believed, depended upon syphilis. In the present instance the history of any syphilitic affection was very imperfect. Nevertheless, from its resemblance to other cases, Mr. Lee thought that it must have a specific origin, and accordingly adopted the mercurial treatment by means of the calomel vapour-bath. It was not easy to state exactly in what way it was that a disease of the upper portion of the occipital bone should produce affections of particular nerves; but Mr. Lee considered that the disease of the bone produced irritation of the corresponding part of the dura mater, and that the nerves distributed in that dura mater became irritated, and by a reflex action might communicate the irritation to any part of the cerebro-spinal system. He had known cases where the nerves of the eye and ear had apparently become affected from this cause, as well as the nerves distributed to the muscles of the jaws, neck, and back; but the parts most frequently affected were the upper or lower extremities. In the above case the irritation had manifested itself particularly in the arm and hand.

GLASGOW ROYAL INFIRMARY.

SURGICAL CASES UNDER THE CARE OF DR. GEORGE BUCHANAN.

The following table contains a *vidimus* of the Surgical operations performed in Clinical Wards 16, 27, and 30, during six months of last session. It includes only those cases of importance sufficient to cause them to be operated on in the theatre, many others being performed in the wards during the clinical visit. The cases here noted were all under the care of Dr. Buchanan, so that the table exhibits about a fourth part of the Surgical Practice of the Hospital during the period included, the remaining three-fourths being nearly equally divided among the other three Surgeons of the Hospital.

Date of Operation.		Initials.	Age.	Disease or Injury.	Duration of Disease.	Operation.	Date of Dismissal.	Result.
Oct.	29	Geo. C.	21	Caries of os calcis	6 months	Excision of os calcis	Dec. 12	Well.
..		Mrs. B.	45	Cancer of tongue	3 months	Excision of part	Nov. 17	Well.
Nov.	5	Jas. C.	10	Caries of elbow	2 years	Excision of elbow-joint	Jan. 13	Well.
„	10	Dor. M'L.	32	Smash of leg	1 hour	Amputation at middle of thigh	..	Death.
„	10	Jas. L.	19	Depressed fracture of skull	2 hours	Removal of fractured pieces	Jan. 7	Death.
„	22	John H.	17	Injury of foot	6 hours	Amputation of leg	..	Death.
„	22	John B.	15	Co. fract. of humerus into elbow	1 hour	Excision of elbow-joint	March 27	Well.
„	26	Chas. M'E.	50	Large condyloma	8 years	Removed by écraseur	Dec. 10	Well.
Dec.	4	John C.	12	Caries of elbow	9 months	Excision of elbow-joint	Feb. 8	Well.
Jan.	9	Rob. A.	9	Smash of both legs	4 hours	Amputation of both thighs	Jan. 30	Death.
„	10	Jos. R.	46	Large hæmorrhoids	2 months	Ligatured	Jan. 21	Well.
„	10	Mr. W.	30	Fistula in ano	6 months	Incision	Feb. 8	Well.
„	11	Mrs. B.	66	Cancer of mamma	18 months	Excisibn of mamma	Feb. 9	Well.
„	31	W. H.	10	Strumous disease of knee	11 months	Amputation of thigh	March 6	Well.
„	31	A. P.	20	Caries of tarsus	12 months	Amputation at ankle	March 11	Well.
Feb.	4	J. C.	6	Deformity from cancrum oris	2 years	Restoration of cheek	April 7	Well.
„	13	J. F.	16	Necrosis of radius	8 months	Sequestrum gouged out	..	Well.
„	15	A. T.	38	Epithelioma of lip	8 months	Excision	Feb. 17	Well.
„	18	P. McE.	25	Ununited fracture of fore-arm	3 months	Excision of movable ends of ulna	May 2	Well.
„	21	T. R.	14	Caries of tarsus	5 years	Amputation of lower third of leg	April 8	Well.
„	28	J. W.	16	Caries of tarsus	4 months	Amputation at ankle	June 3	Well.
March	4	J. S.	24	Deformity of nose from lupus	3 years	Rhino-plastic	June 13	Well.
„	14	P. M.	43	Compound fracture of skull	2 hours	Extraction of depressed bone	March 20	Death.
„	26	P. C.	35	Smash of hand	2 hours	Amputation of hand	May 5	Well.
April	8	P. M.	19	Strumous disease of foot and leg	12 years	Amputation below knee	April 21	Death.
„	8	Mrs. M'J.	50	Cancer of mamma	12 months	Excision	May 21	Well.
May	6	E. C.	17	Fibro-cystic tumour of scalp	4 years	Excision	May 18	Well.
„	9	T. A.	14	Fibrous tumour of arm	12 months	Excision	May 19	Well.
„	16	J. M'T.	50	Tumour of superior maxilla	2 months	Excision of superior maxilla	June 26	Well.

Foreign Body in the Windpipe.—On the 3rd inst. a young man was admitted into the Wolverhampton Hospital suffering from great difficulty of breathing, in consequence of the lodgment of a threepenny piece in the windpipe. Tracheotomy was performed, and after breathing through the tube for fifty hours the patient was made to hold his head downwards, and by the help of "a sharp shake" the coin was dislodged and rolled on the floor.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 21.

THE SECRET OF TEETOTALISM—BIOGRAPHY OF FATHER MATHEW.

Mr. Maguire has given us a biography of one of the best men whom Ireland ever produced—Theobald Mathew. Although it deals with many topics which seem almost to invite controversy, the work is singular no less for the vividness with which it depicts its hero, than for its candid, philosophic tone, and for a simple, manly kindliness of feeling, at times rising into pathos. We may consider Father Mathew's career as furnishing, by an illustrious example, a clear insight into the real nature and influences of what is called teetotalism.

The subject may not be attractive to some of us at first sight, for teetotalism has been, in its time, mixed up with a good deal of nonsense and a good deal of virulence. But not a taint of the sort blemishes Mr. Maguire's biography. Here we have none of the ranting assertions that Alcohol is a Poison; none of the pseudo-physiological claptrap that alcohol is not food; none of the anathemas against moderate men as being worse than drunkards. Mr. Maguire shows the contempt with which he regards that kind of common teetotal oratory, which he describes as "a war-whoop rather than an appeal to the reasoning faculties."

In Father Mathew we have the picture of a genuine Irishman; warm, affectionate, impulsive, self-sacrificing, unselfish, but thoroughly inconsiderate and careless, so as he gained his end, of how it was done, and of what came after. Yet his very failings were potent instruments in the accomplishment of his great work. One of many sons, of a good though reduced family, and remarkable for gentleness as a boy, he chose the priesthood for his profession, and having actually been nearly expelled from Maynooth for excessive and irregular, though innocent boyish conviviality, he became a Capuchin friar and laboured amongst the poorest of the poor, first at Kilkenny, and then at Cork. His extreme goodness and self-devotion, aided not a little by his handsome countenance beaming with benevolence, and a homely but winning style of preaching, which derived little from human learning, soon made him immensely popular. Self-denying and laborious as he was, there was nothing of the solitary ascetic in his composition, for he loved society, was hospitable to a fault, and was never so happy as when feasting his friends, especially children; nor did he disdain the use of what are known in Ireland as "the matarials." At last, in his 49th year, at the instigation of Mr. Martin a Quaker, he became a teetotaler and took the pledge; not, as we gather from Mr. Maguire, from any false asceticism or notion that alcoholic drinks are bad in themselves, but solely as an act of self-sacrifice, that should enable him to set an example of abstinence to persons who could not use those drinks without excess. From the day when he took the pledge—April 10, 1838—so long as his bodily strength permitted, he was most emphatically the Apostle of Temperance, except when his labours in that calling were varied by some other good deed, or interrupted by the more pressing duties of relieving his fellow-countrymen in the awful famine of 1846—47. His time was chiefly devoted to travelling, addressing the people, and administering the pledge, which he accompanied with a medal. Time would fail to tell of the thousands who flocked to him from all parts of Ireland, and of the thousands of converts whom he made during a circuit in England and Scotland, and afterwards in the United States. His disciples were supposed altogether to be two or three millions. Nothing has ever been like him so much as Garibaldi's progress through the Two Sicilies. *Veni, vidi, vici!* was his maxim. At whatever place he visited he was thronged with disciples, kneeling, promising reformation, and receiving the medal at his hands. And there is no doubt but that his work was real. Some hypocrites there were, and some backsliders; but the reality of the temperance movement was proved by the decay of distillers and publicans, and the undoubted diminution of crime. At last the famine came; the temperance organisation went to pieces. Intense anxiety and over-work brought on a fit of paralysis in 1848; then came a tour in America, and on his return his bodily strength failed, and for some time before his death, in 1856, Father Matthew was but the wreck of his former self. But we fully agree with Mr. Maguire, that his good works have not died with him. Their spirit and example live. He proved the fact on the largest scale that abstinence is not only possible, but beneficial, and he introduced a new and higher standard of moral sentiment amongst his fellow-countrymen, through which drunkenness is now contemned as a degrading vice, whereas before it was looked upon as an amiable weakness. Teetotalism in this case, as in most others, is a temporary thing—sobriety is the permanent consequence. The intemperate learn to do without their drink, and, when thoroughly weaned, they find in after years that they can revert to it without abuse.

Now, what is the real secret of a movement such as Father Mathew's? What is the essence of teetotalism? How may an intemperate population be made sober? Is it by mere abstinence? Is it a mere negative virtue? Not at all; such a scheme would not suit human nature. It is really the substitution of one excitement for another. The teetotallers know by instinct that the brain must have some kind of excitement, and they supply it. But instead of strong drink, they give music, oratory, processions, and all thè clatter of controversy, and all the flattering unction derived from holding themselves up as models of virtue, and the alcohol-drinking world as reprobates. To suppose that a teetotaller is merely one who does not drink, or that Father Mathew's Irish disciples merely gave up whisky, is to know nothing of the essence of the system. The English teetotaller joins a society. There he finds plenty of *tame elephants:* people who, instead of reproaching him with his enormities, delight in detailing their "experiences" and "conversion," and in painting their own careers in blackest colours up to the happy moment when the pledge was taken. The society is a sort of club. They have tea meetings; speeches seasoned with plenty of the pepper of anathema against the adherents of the demon Alcohol; physiological lectures, in which viscera hardened in spirits of wine are handed round to show the horrid effects of alcohol; songs, recitations, sermons, processions, medals, everything that can gratify the instinct of self-esteem and love of excitement, and these (save the acrimony and vulgarity) were the weapons of Father Mathew. True, he had at starting the *prestige* of five-and-twenty years' beneficent toil at Cork, and the love and veneration of the whole Irish people was so great that had he bid them they would have done much more besides taking the pledge. Suppose he had joined the Repealers!—but he never allowed one breath of political feeling to taint his work of moral reform, and with the most entire honesty always repudiated the idea, entertained by his countrymen then and since, that he was able to work miracles. The real agencies employed to work this mighty change, and to keep the converts steady, in addition to his personal influence, were these —meetings, speeches, the establishment of reading-rooms in villages in which labouring men could sit by a bright fire in the evening and discuss the news, and, above all, the practice of music. Wherever there was a temperance society, there was a band of music; and it is clear, from the biography before us, that next to a speech from Father Mathew himself, nothing aided the temperance cause so much as the thunders of a double drum. The moral is, would you wean people from drink, amuse them and excite their brains powerfully by innocent means.

TOWN DAIRIES AND ROAST BEEF.

The Lecture which Professor Gamgee delivered at the Marylebone Institution deserves a few words of passing comment and friendly criticism. It is evidently the work of an acute and vigorous man, a little hasty, perhaps, in drawing conclusions, and apt, like Dr. Christison, whilst preaching one neglected truth, unduly to depreciate others.

He begins by asserting the necessity of cow-sheds for cows in populous places just as much as of stables for horses. We would qualify this by adding that some accommodation for cows in cities is necessary, especially in hot weather, until means shall have been devised of sending up milk quite fresh, and frequently, for the use of young children. Country milk, in our experience, is not brought to town fit for young children during the hot season. But all the milk need not be of town produce.

Secondly, he asserts that the diseases which create the greatest havoc do not arise from *dirt*, but from *contagion*. Hence, that although the cleanliness so largely insisted on of late is good in itself, and tends to diminish nuisance, it does not check those specific diseases, as the pleuro-pneumonia, which depend on contagion. Here the Professor underrates the effects of cleanliness in destroying contagion and its *habitat*. He very properly inveighs against the carelessness of the railway companies and the market inspectors, whose filthy cattle-trucks and filthy lairs retain and propagate the contagion. Even on his own showing greater cleanliness would here act as a preservative; and if sulphate of iron and tonics tend, as he says, to preserve the healthy cattle from contagion, so must pure air,—and pure air is a consequence of cleanliness.

The pleuro-pneumonia, says the Professor, attacks 30 or 40 per cent. of milch cows. "Eighty-eight dairymen in Edinburgh lose upwards of £10,000 annually. Nine dairymen in Dublin lost on an average of twenty years £1158 per annum; and on the 12,000 cows kept in London there is an annual loss of at least £80,000."

Now, we find a difficulty in reconciling this statement with the facts which he details in the latter part of his lecture, where he discloses, for our edification, some of the "mysteries" of cow-keeping. He says:—

"It must strike any one that if cows die off as rapidly as I have stated the milk trade must be a profitable one. . . In one sense, the rapid changes in the dairies are most advantageous to the dairyman. He has a stock constantly on hand yielding the largest possible amount of milk. For two months after calving a cow is worth very nearly twice as much as any two months after that period up to the time of her running dry. She will yield a profit of 5s. or 6s. a-day, selling her milk, as in Edinburgh, at 4d. per quart. Beyond this period she will not earn more than 3s. or 4s. It is evident that fifty cows, all within two months after calving, are worth as much to the dairyman as a stock of eighty or ninety cows that have calved from three to six months. . . . *Contagious diseases have taught dairymen that there is the largest profit in a town dairy when the stock is not kept too long.* . . . It is quite easy to understand what the largest dairyman in Edinburgh said to me a short time since, viz., that nobody had known how to make money out of cows until the disease came amongst them."

We should not have made so long an extract as this had it no direct bearing upon the practicability of the scheme of amendment presently put forth by the author.

The next fact dwelt upon is the propagation of the disease by communication from animal to animal. He asserts that the disease may be extinguished. He recommends the cow-keepers not to trouble themselves with fruitless endeavours to discover a remedy, but to purchase their stock carefully out of breeding districts free from the malady; to place their newly-acquired cows for a time in quarantine before mingling them with the rest of their stock; to employ a staff of properly-educated Veterinary Surgeons, to each of whom should be committed the oversight of a certain number of cows, being paid about 7s. 6d. per head for their trouble; that these gentlemen should regularly auscultate the cows, in order to discover the lung disease *in the premonitory stage;* that the cows when thus first seized should be sold, being transferred for this purpose in a van kept for their use to a place set apart to receive such diseased animals, and from thence to the slaughter-house, where they are to be prepared for food; that they should be rigidly excluded from the ordinary markets, and not be driven along the public roads; and that the Surgeon should keep a register, by which, at any time, the number of diseased cows in London may be ascertained. He further advises the general use of inoculation when the disease appears in a shed, believing there is evidence enough of its preventive efficacy.

Now, before it can be expected that the cowkeepers will consent to part with their cows, and in the manner suggested by Professor Gamgee, as well as to go to the expense of maintaining a staff of Veterinary Surgeons, they will necessarily have to be shown that all this is not only to the interests of the public, as cheapening meat, and rendering both the meat and the milk supplied for consumption more wholesome, but that it will be for their own pecuniary interest.

Now, let us point out a dilemma into which Professor Gamgee puts himself. This question of pleuro-pneumonic beef is one on which we have quite a thirst for facts. On the one hand, we have personages, including the Professor himself, talking most largely about "diseased meat," and its bad effects on the public health, and about the immense quantity of it daily consumed. On the other hand, most of us, whilst deprecating the use of such meat, if possible to avoid it, yet ask calmly for proofs of the ill effects. Does a pleuro-pneumonic sirloin ever grace the tables of the rich? Do those rolled ribs of beef which form the Sunday family dinner in so many British homes, and which, if pleuro-pneumonic beef be so common, must occasionally be of that order, ever prove directly, unmistakably poisonous? Will the personages who write of the "many cases of illness arising from diseased meat and milk" give us the particulars of a few such cases? With the glaring facts that such beef is plentiful, and that no ill symptoms are known to arise from eating it, most of us, whilst open to further light, conclude that such meat, if not visibly altered, nor tainted, is second-rate beef, but not poisonous.

Professor Gamgee, however, if we have understood him aright, has always contended that it *is* poisonous, and yet he now proposes formally to license and sanction the sale in the premonitory stage. Now, to sanction the sale of inferior beef, if wholesome, is one thing; to sanction poisonous beef another; and although precise evidence is still wanting of the unwholesomeness of such diseased meat when properly cooked, we must say that we think the proof of its entire wholesomeness lies with those who recommend that it shall be permitted to be consumed. We are quite at a loss to see how after his former lucubrations the Professor can desire, without grave facts to support him in favour of the harmlessness of the meat, to legalise the sale of cows for food who are labouring under this infectious blood disease.

If we are told that the sale would only be sanctioned in the "premonitory" stage, we should like to be informed whether the disease can be detected by auscultation before changes in the respiratory organs distinctive of something more than premonition are existent. But passing over this difficulty, another occurs to us. Is it likely that cowkeepers would abstain from sending their cows to the public market, and thus obtaining a full price for them at a period of the disease when they may be passed off as healthy animals, the disease being only detectable by an auscultator? At the proposed market for diseased animals such cows would necessarily fetch a lower price. Is it proposed to confer absolute powers of direction in this respect upon the Surgeons paid by the cowkeeper? If so, it occurs to us that an additional difficulty would arise in the private relation between the cowkeeper as the employer, and the Surgeon as the employed. What, too, is to prevent the sale of cows privately to the butcher in every stage of the malady? Would not the diseased beast market itself be liable to abuse? Who is to place the limit upon disease, so as to say which beast is in a stage of disease so early as to render its sale warrantable, and which is to be rejected?

Now, we do not absolutely reject Professor Gamgee's proposal, but we do wish to have it thoroughly discussed. Perhaps all the difficulties which occur to us may be got over, but we do not think they are likely to be surmounted without an appeal to Parliament, and then we fear that the voluntary system of supervision suggested by Professor Gamgee will have to give place to a compulsory one. At any rate, the proposal will have to be a good deal modified before it will work satisfactorily, and these modifications are, we fear, of such a character as not to make them at all more palatable to the owners of this species of stock. Next, it will be a question whether it is desirable to establish a system based upon compulsion; but this is a matter for Parliament to settle. But if it is so held, then the following appears to us to be essential elements in it:—1. That the Veterinary Surgeons should be selected by local authorities, and not be liable to discharge at the will of the cowkeepers. 2. That cows found diseased and ordered for slaughtering shall be indelibly marked. 3. That the inspector of a public market shall be held responsible for admitting any such marked animal among the healthy ones. 4. That no branded cow shall be sold anywhere but at the market for diseased beasts. 5. That the inspector of the diseased beast market shall be a person capable of discriminating the several stages of disease, and shall have a discretionary power of slaughtering such as are too far advanced in disease to be fit for human food, and that he shall see that the flesh is boiled down. But if in this or in any other way the manifest difficulties of the proposal can be met so as to render the scheme practicable, we can only say that in the interest of the public health it shall have our hearty support. One thing is clear. Some check must be placed upon the present disgraceful mode in which animals are brought by railway to the Islington market. The complaints of the cowkeepers at the Marylebone Institute were loud and universal as to the filthy state of the cattle trucks, the result of which is an indefinite propagation of such contagious maladies as the foot and mouth disease.

THE WEEK.

THE SCIENTIFIC EVIDENCE AT THE RECENT INQUESTS.

The scientific evidence given at the inquests on the bodies of Hunt and his three victims has confirmed the supposition that the former died by aconite, the latter by prussic acid. Dr. Puckle's evidence in the case of Hunt proved that he had presented the following group of symptoms:—Violent vomiting of a spasmodic character; pallor of the countenance; dilatation of the pupils; exceedingly feeble action of the heart, with a small and scarcely perceptible pulse; quiet and regular respiration between the fits of vomiting. On attempting to walk he staggered. Shortly before death he complained of being sleepy and faint, and seemed to doze, but he woke almost immediately, saying he had had most delightful dreams. At this time the eyes were fixed, and presented a sparkling brilliant appearance. His mental faculties were retained to the last. He recognised Dr. Puckle, and reminded him of having attended Mrs. Hunt in a confinement. A bystander asked him if he had taken prussic acid. He replied "No; if I had I should not be here now." To the question whether he had taken aconite, he replied "I may have taken aconite; I think it was." Shortly before his death he wrote an order on his employers for payment of his back wages. Dr. Puckle seems at the time to have suspected poisoning by aconite, and the idea was probably suggested by the failure of the heart's action, the vomiting, and the dilatation of the pupil. But if we admit, with Dr. Puckle, "that the symptoms of poisoning by aconite are well known," we nevertheless do not believe them to be so well defined or unique that it would be possible to diagnose, with any certainty, a case from the symptoms alone. No doubt "the symptoms in this case were decidedly those of poisoning by this substance," for there is no probability that Hunt had taken any other, but they differed in several important respects from the symptoms which have been recorded in some other cases. According to Dr. Fleming, aconite, when it produces death by its effect on the heart's action, causes more or less difficulty of breathing and speechlessness, neither of which effects were observed in Hunt. In some instances death occurs by paralysis of the muscles of respiration and asphyxia; in others convulsions have been prominent symptoms, or the patient has become comatose before death. Occasionally the pupils are found contracted, although, as in Hunt's case, they are commonly dilated, but the latter condition obtains, as a rule, in poisoning by all the cerebro-spinal poisons. Hunt's symptoms were quite compatible with poisoning by aconite, but they were equally so with poisoning by several other agents. The same or very similar symptoms have been observed in poisoning by tobacco, conium, digitalis, etc. We make these remarks as we fear, were Dr. Puckle's evidence to pass unnoticed, it might be generally supposed that poisoning by aconite was as unmistakable as poisoning by strychnia. His assertion, if correctly reported, that one-fiftieth of a grain of aconitina was sufficient to destroy life, and that, according to Professor Taylor, ten drops of the ordinary tincture contained that quantity of the alkaloid, and was sufficient to produce death, is scarcely warranted by Professor Taylor's statement. Dr. Taylor says that one-fiftieth of a grain nearly proved fatal to an elderly female, and that one-tenth would probably destroy life. The same authority elsewhere states that the dose of the tincture should not exceed five minims, and quotes a case in which two doses, each of six minims, produced alarming symptoms. In most cases of poisoning by aconite, according to Dr. Fleming, the venous system is congested, and especially there is engorgement of the brain and its membranes. In some instances only is there redness of the mucous membrane of the alimentary canal. The following were the post-mortem appearances in the case of Hunt, which, it will be seen, coincide with those observed by Dr. Fleming:—

"The muscles were particularly rigid. On opening the head, the brain was found quite firm and perfectly healthy. The sinuses were very turgid, the ventricles contained very little fluid, and there was no effusion at the base of the brain. When the chest was opened, the heart presented a perfectly healthy appearance, the right side was, however, greatly distended with dark blood in a fluid condition, the left side being contracted and containing no blood. The connecting vessels of the heart and lungs were also healthy, and the same might be said of the liver, spleen, and kidneys, and all the other internal organs. The bladder contained only a small quantity of urine, and all the other internal organs were in a perfectly normal state. Dr. Puckle removed the stomach for the analysis of its contents. On opening it it presented the appearance of excessive capillary congestion at the larger end, that portion being of a bright red colour. Under ordinary circumstances it ought to have appeared white. There were strong marks of irritation, accompanied by softening of the mucous lining of the stomach, and the whole of the membranes were in a highly corrugated condition. The contents consisted principally of blood and mucus."

Dr. Puckle's declaration that he detected aconitine in the contents of the stomach, and in the vomited matters took us, we must confess, by surprise. Aconitine is not an easy substance to be detected under the best of circumstances, but to separate it from an alcoholic tincture, mixed with large quantities of organic matter, was, we are ready to acknowledge, a triumph of toxicological art. However, our surprise was lessened on reading that the test used was bichromate of potash and sulphuric acid, as these substances give precisely the same reaction (that of liberating the green oxide of chromium) with nicotina, stropia, morphia, narcotina, codeia, and it may be with a large number of other substances which have nothing of the poisonous in their composition. It is clear that such a test can at best be only a confirmative one; by itself it is of little or no value.

The examination of the viscera of Mrs. Hunt and her two children, together with the chemical analyses, were conducted by Dr. John Randall, Lecturer on Medical Jurisprudence, and Dr. Matthiessen, F.R.S., Lecturer on Chemistry at St. Mary's Hospital. Their report stated that

"Having found prussic acid in the contents of all three stomachs and certain other portions of the bodies, the conclusion was arrived at that the mother and two children died from the administration of that poison. From finding so small an amount of potash in the contents of the stomach on incineration it seems clear that cyanide of potassium was not used, and the characteristic smell of prussic acid being strongly perceptible at the post-mortem examination, and weak when the stomachs were chemically examined, proved that essential oil of bitter almonds had not been administered, the odour of that substance being very persistent, besides which no trace of essential oil could be detected. Another proof that the poison was given in the form of prussic acid is, that in making the experiment that acid was found to mix easily with porter. Having added two drachms (120 drops) of prussic acid of pharmacopœial strength—viz., 2 per cent. of real acid—to a pint of porter, it was found that its presence could not be detected either by the taste or smell."

The chemical analysis in these cases is therefore perfectly satisfactory as to the nature of the poison used. But the difficulties connected with its administration remain untouched. There can be no doubt that two drachms of prussic acid would have been sufficient to destroy three lives, but we may reasonably doubt whether a portion only of that quantity, when largely diluted, would have been sufficient to produce the bright red congested appearance which the lining membrane of the stomach of Mrs. Hunt presented. Congestion of the lining membrane of the stomach, though undoubtedly a common post-mortem appearance in poisoning by prussic acid, is not always observed, and, when present, appears to follow the application to the mucous surface of a large quantity of the acid in a tolerably concentrated state.

FROM ABROAD: THE DISCUSSION ON HYDROPHOBIA—AGENCY OF VAPOUR IN VENTILATION—INTRODUCTION OF HYDROPATHY INTO THE BELGIAN ARMY—IMMUNITY OF NEGROES FROM YELLOW FEVER—A HUNGRY STUDENT.

The discussion on hydrophobia at the Academy of Medicine has resulted in the appointment of a rabies committee, charged with the duty of investigating prophylactic measures, and endeavouring to procure the extinction of this scourge of the canine race. All that can be done in the matter may be expected at the hands of the very competent men—MM. Rayer, Tardieu, Trebuchet, Leblanc, and Bouley—who have been appointed on this committee; and it is to be hoped that before long the public will be in possession, in a condensed form, of the best rules of conduct deducible from its investigations. In reference to the subject, we may notice an interesting paper read before the Vienna Medical Society by Professor Pillwax, of the Veterinary Institute (*Wien Wochenblatt*, No. 47), in which he gives an account of twenty-eight dogs brought to the Institute suffering from rabies last year. On only one of these dogs could the most careful examination detect the slightest trace of a bite on any part of the body,—a proof, in Dr. Pillwax's opinion, that the disease may arise spontaneously, and appear as an epizootic. It so prevailed in Vienna in 1814, 1815, 1838, 1842, etc., the explosion being by no means confined to Vienna, but affecting other parts of the empire also. Of the twenty-eight dogs, only two were bitches, the greatest number being between two and six years of age; one was only three-quarters of a year old, being the youngest Dr. Pillwax ever met with in his extensive experience. At the autopsies of these dogs the most remarkable appearances observed were: great cerebral œdema, hæmorrhagic erosion of the stomach (in six), and fibrinous coagula in the cavities of the heart. All kinds of indigestible substances were found in the stomachs, but never the slightest traces of food. The Marochetti vesicles under the tongue were found in none of the dogs. Quitting the subject of hydrophobia for the present, we may remark that, taking even the lowest estimate of the number of cases met with in France at twenty per annum, we cannot but be struck with the far greater infrequency of this fearful disease in our own country; and the question naturally occurs whether this difference may not, in some measure, be due to the general employment with us of excision as a prophylactic, while on the Continent cauterisation seems almost exclusively to be resorted to.

General Morin, who has much occupied himself with improvements in the ventilation of public edifices, in a note addressed to the Academy of Sciences, treats of what he terms the "hygrometricity" of confined places. Much struck with the importance which the English engineers and authors attach to the imparting to the air employed for ventilation, whether heated or not, a certain amount of moisture, he was induced to investigate whether the salubrity of such air might not be due in some measure to the development of a certain amount of electricity by the passage of the air through the vaporised water (as is the case with regard to dew and rain during storms) giving rise to the production of free oxygen (*oxygène actif*). If this, or some analogous modification, can be shown to take place, we have placed in our hands a simple, efficacious, and economical means of purifying the air of inhabited places, especially in summer—air containing free oxygen possessing in a high degree the property of burning certain miasmata and emanations from bodies in a state of putrefaction. The general accordingly instituted some experiments in order to ascertain whether the dispersion or solution of a certain quantity of sprayed water in the air sensibly modified its electrical condition. The results show the extrication of free oxygen and the subsequent or concurrent formation of an acid. As both the oxygen and the acid, probably a nitrous compound, possess the property of destroying putrefactive emanations, their presence sufficiently proves that the vaporisation of water in air, besides the increase of moisture and depression of temperature which it gives rise to, may exert an action on the animal economy and upon the air of habitations deserving the attention of sanitarians.

The Medical Inspector-General of the Belgian Army, M. Vleminckx, has issued a circular to all the Army Surgeons, informing them that in consequence of the proved efficacy of "*rational hydrotherapie*" in a variety of diseased conditions, he considers the time has arrived for its formal introduction amongst the avowed therapeutical agencies at their command. He therefore induced the Minister of War to send an Army Surgeon of high repute to thoroughly investigate the matter at M. Fleury's establishment at Schwalbein; and consequent upon his report it has been determined to establish a hydrotherapeutical department at the Brussels Military Hospital, and to accept M. Fleury's offer to superintend the introduction of the method, and illustrate its application by a course of clinical lectures, to commence in November. Patients from the various other garrison Hospitals suffering from diseases likely to be benefited by this means are also to be dispatched to the Brussels Hospital for the purpose of undergoing this treatment. The following are the affections more especially amenable to it:—Chronic intermittents (with their subsequent cachexiæ), chronic visceral engorgements of the liver, spleen, and kidneys, chloro-anæmia, chronic rheumatism, recent albuminuria, chronic gastritis, gastralgia and neuralgia in general, constitutional syphilis, hydrarthrosis, chronic joint disease, protracted convalescence, etc.

The French Mexican expedition furnishes an additional example of the freedom of the negro race from the diseases which in hot climates exert so devastating an effect upon whites. M. Reynaud, Inspector-General of the Marine Force in Mexico, addresses a letter to the Academy of Medicine, in which he states that the last epidemic of yellow fever exemplifies the above fact just as did that of 1862. While the yellow fever produced great numbers of victims amongst the Europeans employed at Vera Cruz and the fort St. Jean d'Ulloa, not a single death from this cause occurred among more than 600 soldiers and sailors from the West Indies, almost all of them yet undergoing the most trying labour. The mortality among the Europeans affected also the officers, notwithstanding the conditions of comfort and good hygiene under which they were placed. During the epidemics of 1862, it was suggested that this complete resistance offered by the negro race and its derivatives to the pathogenic causes of the yellow fever might be attributable to acclimatization, for all the men brought from the West Indies had long been accustomed to tropical regions. During the epidemic of the present year, however, this opinion has been tested on a sufficiently large scale by the arrival of the Egyptian battalion at Vera Cruz. More than 400 negroes, entirely strangers to America, have, just as the sailors from the West Indies, traversed the whole period of the epidemic without undergoing any loss.

One of the French Medical journals having announced that an *externe* had been erased from the list of the *concours* without, kindly enough as it seems, stating the reason, the indignant youth puts the press-law into operation, compelling the editor to insert his protest, and mulcting him in the sum of five francs ninety centimes as costs for serving it. In this he demands, in the name and for the honour of Medical students, of whose body he is proud of forming one, that the cause of his name being erased should be stated, in order to prove that it is not of a grave nature, as asserted. "As do my fellow-citizens and my friends, I lend an attentive ear to your explanation. The pupils of the Ecole de Médecine de Paris exhibit the same delicacy in their susceptibility as the wife of the august Cæsar." Alas! for bombast, the abashed editor contents himself with quoting the words of the authoritative decision with respect to this lad. "From the report read, it results that M. Jacquier, an *externe* of the second year, has been in the habit of appropriating from the rations of the patients the food necessary for his personal use; that he has abused the confidence of the heads of the service by obtaining, through supplementary tickets, supplies, to which he had no kind of right, and that he has been daily obtaining coffee under the guise of medicine." In recollection of their somewhat riotous conduct last year, Messieurs les Etudiants are reminded in the present session, by means of placards, that, according to the law, any disrespect shown to the Dean or Professors of the Faculty will entail the loss of one or more inscriptions, while conviction of being engaged in any riotous or unlawful meeting or action will be followed by entire exclusion from the registers of the Faculty.

ARMY SURGEONS ON FEVER.

Dr. Marston's report, to which allusion was made in a recent Number, treats of an epidemic of typhoid or enteric fever from which the garrison of Malta suffered severely during the year 1859. The memoir was written in the winter of 1860, and forwarded to the Medical Department in the summer following. It appears to have been revised during the current year.

It seems that fever, especially the enteric form of it, prevails more among the troops than among the natives. At the period in question, the half-year ending December 31, 1859, the expeditionary force to the Crimea raised the garrison of Malta to the number of 6744, and among these there were no less than 1196 cases of fever; 41 died during the same period, principally from this disease.

In the Royal Artillery, to which Dr. Marston is attached, the total strength for this half-year was 1036, among whom 170 cases of fever occurred, 48 of these being typhoid, and 7 proving fatal. Among the officers, their wives and families, the women and children of the brigade, and the attached departments, there were 13 cases of typhoid fever, with 2 deaths. The total of this complaint was therefore 61, with 9 deaths. The mortality from fever was thus 7 per 1000 living, and in the typhoid form about 18 per cent.

The writer commences by acknowledging the four forms of fever common in Great Britain, namely, febricula; relapsing fever; typhus; and typhoid, enteric or pythogenic; to these he would add—5. gastric remittent fever, very prevalent in the Mediterranean, and—6. bilious fevers, far less common.

Typhus fever was imported into Malta by the notorious Egyptian vessel in 1861, but did not spread; also, in 1855, a similar occurrence had taken place with the communication of the disease to two persons who attended the patient, and no others. With these exceptions, typhus or true relapsing fever is stated to be unheard-of in Malta.

He then remarks that "all portions making up the pathology of the diseases in summer, autumn, and commencing winter of this climate, are interdependent, the diseases which follow being only a continuation of those which preceded. They are not superimposed, but congeners forming interlaced links of the same chain. They intermingle with each other, are co-existent, or successive. What is wanted is some philosophical term or classification which shall serve to point out the indissoluble parentage which indicates certain morbid actions, of however different appearances, as branches of the same stem. It is highly probable that some atmospheric conditions beyond our ken enter into the creation and spread of the fever poison. If within the limited area presented by a regiment or garrison we can more leisurely and exactly trace the steps and progress of a disorder, it must not be lost sight of that there are other causes and influences at work upon a far larger scale, waves of diffused influence."

After illustrating these statements by comparison of Malta, Corfu, Gibraltar, and other stations, typhoid fever is adverted to as contrasting with other diseases by its power of originating *de novo*, and of independent reproduction. Its connexion with bad drainage and impure water is shown from conclusive examples, and its coincidence with still atmosphere and moist winds after the drought of summer.

He then approaches "what seems a necessary element in inquiries of this kind. It has been shown how, apparently from the same localities and external causes operating, different but allied disorders have appeared, indicating that there exist numerous diseases (distinct enough in their symptoms, pathology, and probably distinct enough in their specific proximate causes) which may have a common origin, and possess allied etiologies. Medical inquirers, like many philosophers, including the illustrious Bacon, are in the habit of applying one, and generally the last, standing or occurring in a sequence of causes as *the* cause, and treating, in short, co-existences as successions of phenomena. J. S. Mill and the late Sir W. Hamilton would take them all as necessary antecedents, and call them concurrent causes, or a plurality of causes. Such an assembly of causes, whatever they may be, are necessary to the production of typhoid fever, and if one or other of them be absent, disease no doubt will still arise, but not the disease typhoid fever. Hence it is that in spring and summer, diarrhœas, dysentery, or fevers occur in the very same localities, and bodies of men, as in autumn and early winter, furnish cases of typhoid. If we perceive in typhoid a fever having points of resemblance which link it strongly to the contagious exanthemata, and indicate a certain though less stable connexion with malarious fevers, another step brings us to the febriculæ and gastric remittent types, which have scarcely any connexion with the contagious exanthemata, but a close one with the malarious fevers. Between these and the bilious remittent fevers, confessedly malarious, there seems to be hardly any difference but one of degree."

Dr. Budd's views on contagion having been discussed, and contrasted with a strong case in favour of spontaneous origin, the introductory part of this able memoir is summed up in eight propositions, showing that typhoid fever is endemic and circumscribed—probably contagious, though only in a subordinate degree—allied to other gastro-enteric diseases—intimately connected with bad drainage and fæcal fermentation—not the only resultant disease of these latter causes—capable of spontaneous origin—ordinarily commencing in autumn, ceasing in spring—and probably influenced by the character and constitution of the season.

Age, acclimatization, aspect, eruption, pulse, the digestive system, jaundice, intercurrent vomiting, abdominal tenderness, and gurgling, diarrhœa, hæmorrhage, pulmonary complications, epistaxis, cardiac disease, renal disorders, relapses, duration, and morbid anatomy, are all minutely considered. Some facts relative to febricula incidentally lead to the information that "Civil Surgeons practising in Malta consider that a very marked change has taken place in the type of fevers generally. They are in the habit of referring the date of such alteration to the period of the Crimean war. However this may be, typhoid and fevers of long duration appear to be more common than they were six or eight years ago."

Gastric remittent fever, also termed Mediterranean fever, is contrasted with typhoid. It seems to be marked by "imperfect remissions for two or three days during the course of the disease." These are very frequent during convalescence. It is noticed that "the nearest approach to the elucidation of its pathology is to be found in Dr. Peacock's admirable lectures upon the remittent fevers prevailing in the metropolis." A tabular comparison of this complaint with relapsing fever sets their differences forcibly in view, and leads to some concluding remarks. The operation of two agencies is indicated—1. The effects induced by residence in a hot, moist climate; 2. Certain localized conditions connected with drainage and damp. The author, moreover, holds the opinion that many febrile, gastric, and other disorders of the organs of primary assimilation, as well as neuralgia and dysentery, may be as much exponents of malarious influence as true ague or remittent fever.

In considering treatment, Dr. Marston sets out by "entering a protest, with all modesty and humility, against the line of practice indicated by that much-lamented and highly-endowed man, the late Dr. Todd." He not only complains of its cramping the domain of scientific medicine, but also of the baneful effects which arise from using stimulation as the essential basis of treatment in all diseases.

"If," he says, "the question were one of stimulation, under the idea of supporting the vital powers, or non-stimulation, in *all* pathological states of the system, I verily believe that the latter course would be the most beneficial. I can state pretty positively, from the result of a tolerably extended series of observations, partaking almost of the nature of direct experiment, that a stimulating treatment in all cases and stages of the febrile diseases of this climate, particularly in those of enteric fever, is a measure fraught with evil consequences to the patient."

Salines, diaphoretics, and mild laxatives in early stages, with nourishment and cautious stimulation in the later, form the bulk of the treatment advised, assisted at times by dry-cupping, local depletion, fomentations, and counter-irritation. Quinine is stated, after careful inquiry, to exercise no specific effect, nor do emetics seem to cut short the disease.

An abstract of some leading cases brings this excellent paper to a close.

It is needless to add that the papers we have thus passed under review reflect high credit on the service of which their authors are members. No branch of the Profession possesses more extensive opportunities of observing and investigating the laws which govern the origin and distribution of disease than does the Medical Department of the Army, and in none are to be found men more fitted by ability and acquirements for the task. At a time when other countries are turning their attention to the distribution of disease on the earth, and works like that of Hirsch on "Historico-Geographical Pathology" aim at condensing facts into a system, it may be at once a source of honour to England and to our military brethren if we can by their aid study the march and progress of epidemics, and make what the late Dr. Graves termed "Medical observatories" of those innumerable British colonies and dependencies on which the sun never sets.

REVIEWS.

Guy's Hospital Reports. Third Series. Vol. 9. 1863. London John Churchill and Sons.

This number begins with an excellent comprehensive memoir on Syphilitic Affections of Internal Organs, by Dr. Wilks, illustrated with several good lithographs. Dr. Habershon contributes facts as to pulsating abdominal tumours. Mr. Towne explains a stereoscopic test for the retinæ. Dr. Taylor narrates a case where a large quantity of nitrate of potash was taken medicinally, and unites with Dr. Wilks in a series of one hundred observations as to the cooling of the body after death. Mr. Bryant gives a clinical report on Tumours, and Mr. Hinton records a growth within the Tympanum. Dr. Wilks's co-editor, Mr. Poland, takes "a slight historical survey" of Foreign Bodies in the Stomach and Intestines. Dr. Dupré closes the list with some observations on the Iodic Acid Test for Morphia.

Although we miss some prominent names in this number, it is none the less interesting and valuable. The publication has always appeared to us one of the most creditable results of our Metropolitan Hospitals, and it is to be regretted that it is a solitary production. Every large institution for the cure of the sick ought to give to the public a similar document, at once a guarantee of its intellectual activity and a contribution to Medical science. It is to be hoped that the Statistical Reports published of late by several Hospitals may ere long be supplemented with short monographs and cases by the staff. Without these, the mere figures are all but worthless, and the tables mere arithmetical precipitates, from which all vital matter has been studiously eliminated.

On the Arcus Senilis; or, Fatty Degeneration of the Cornea. By Edwin Canton, F.R.C.S. London: R. Hardwicke. 1863.

Mr. Canton here reproduces in a collected form his important observations, the substance of which appeared originally as a series of articles in a Medical periodical. Commencing by a minute description of the senile change in question, its coincidence with similar deposits in the lens and capsule, and with fatty degeneration of the ocular muscles, he proceeds to show "how generally diffused through many textures is this condition which has involved the cornea in old age." Its hereditary occurrence, and also as the result of injury or local disease, are then considered, and contrasted with instances where it is absent in advanced life. The association with it of fatty and calcareous degeneration of the costal and laryngeal cartilages and of the heart and arteries occupy a chapter, followed by observations as to its formation in persons of intemperate habits and of gouty diathesis. The eighth and last section is devoted to general and additional observations, illustrated by recorded cases, leading to the conclusion, in the words of Mr. Paget, "that the arcus senilis seems to be, on the whole, the best indication which has yet been found of proneness to an extensive or general fatty degeneration of the tissues." A few pages are devoted to the subject of its removal by Medical treatment. The author vouches for the possibility of such a disappearance *pari passu* with amendment of health, and confirms his views by a case quoted from Dr. R. Quain's experience. The restoration of general physical strength, with the cessation of overwork, mental or bodily, and similar depressing agencies, are the therapeutical means which are recommended to favour, if not removal, at at least an arrest of any farther advances.

Urine, Urinary Deposits, and Calculi, and on the Treatment of Urinary Diseases. By Lionel S. Beale, M.B., F.R.S., Professor of Physiology and Morbid Anatomy in King's College. Small 8vo. Second Edition. London: John Churchill and Sons.

The second edition of this work is before us. It extends to 440 pages, exceeding the former edition by nearly 100. It contains a vast amount of information, well digested and conveniently arranged. The subject is completely worked out from beginning to end. The apparatus and tests for the examination of the urine and its deposits, both microscopically and analytically, are described, together with the process for volumetrical analysis. A full description is given of the various extraneous matters which may be present in the urine, either accidentally or introduced with the purpose of fraud. This chapter in particular is a very useful one, inasmuch as those who use the microscope but seldom are frequently puzzled by fragments of vegetable and other matters which find their way into receptacles for urine. The urine and its constituents in health and disease are described, and the chemistry of the secretion is fully detailed. The results of sixty-nine analyses of urine in various states of disease are given. The value of the book is very much enhanced by references in the appropriate places to isolated cases and observations scattered throughout the Medical periodicals. Indeed, it contains a complete epitome of the subject of which it treats. Twenty-four plates, containing 133 figures, are interspersed throughout the text.

Dr. Beale's eminence as a physiologist and microscopist is a sufficient guarantee of the truthfulness of the drawings. They are something more than shapely diagrams, they are faithful representations of the natural objects themselves, and the uninitiated will not fail to recognise them as such.

Dr. Beale "has endeavoured to increase the usefulness of the work by the addition of observations on the treatment of urinary diseases." These are simple and practical, and have considerable value, as coming from one who has devoted much attention to the subject.

This book cannot fail to meet with increased success. When an author gets together all that is known of an important subject, enlarges it by his own experience, and puts it in a simple and easy form before his readers, he may be sure that the number of them will increase.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh.

The Social Science Congress in Edinburgh was a great success. That is, vast masses collected and listened to papers which demonstrated the truth of such propositions as—"If a man has no air to breathe he'll die from want of breath," or, "A convict is not generally a moral man," or, "Impure water contains impurities," ending with—

> Utopia is a pleasant place,
> But how shall we get there?
> *Straight* down the crooked lane,
> And all *round* the *square*.

Lord Brougham was wonderful; he complimented the speakers to their hearts' content, and if that isn't the acme of Social Science, what is? He might well compliment Lord Neaves on his well-written, scholarly address, in which he advises laughter as a sanitary pursuit. Mr. Brown, an advocate of whom people are talking a great deal, read a paper anent women following males' trades. It was a good subject for a clever man who knows how to argue and write; but what could he say? When will women know when they are well off? Don't you think I'd be far better pleased to be sitting with a cat on my lap elaborating the "Corsair" in scarlet Berlin wool this rainy day, than having to tramp through the mud and see if some offensive person is better or worse? Would I not sooner be even a "decayed gentlewoman" than the lawyer's clerk who lives on the stumps of quill pens? Would I not sooner be anything than have to "improve the shining hour?" Women don't know what it is to work in the professions, to go through that daily agony termed "supporting yourself by your own exertions."

Suppose we take two, Damon and Phillis. They start, say, as Doctors, both equally learned; they want patients,—patient means a sick person, generally confined to bed. "Wake up, Dr. Phillis, she's very ill, it's blowing and snowing, and the night is a malevolent one to your sex," and Dr. Damon will be upon you with remorse and "Dover's powders," and other remedies very soon . . if you do go out.

Everything considered, our classes are very good. Simpson's is crammed. The turmoil in Academic politics has been wild for several years, and yet Edinburgh has never lost ground. Two extra-mural lecturers have left Edinburgh; one, a chemist, goes to Roorkee, in Bengal. Every one who knows Dr. Murray Thomson will feel satisfied, that the Roorkee people have got a working man who will not only work with his own chemicals, but with his students, as a kind and judicious teacher.

Dr. Struthers has gone to Aberdeen, and will make an excellent Professor of Anatomy for Aberdeen.

The departure of our Social Science Congress has been followed by all the dulness of a Scotch fast-week, which twice a-year overtakes this city; and now again comes the bustle connected with the opening of our University.

The semi-popular constitution given by the Act of 1858 to this School of James VI. has instituted a body called the University Council, which consists of the Chancellor, Rector, and other members of the University Court, the Professors, all Masters of Arts and Doctors of Medicine who have, as matriculated students, attended classes for four complete sessions. The Council meets twice a-year for the purpose of taking into consideration all questions affecting the well-being of the University. It has also the privilege of sending a representative to the University Court. The last election took place four years ago, when Lord Barcaple (then the Solicitor-General) was carried by a large majority over Sir John Macneil. The election took place on the memorable day when Lord Brougham was elected Chancellor, and, with few exceptions, those who supported Lord Brougham tendered their votes also for Lord Barcaple. The office is held for four years, and consequently a vacancy occurred at present. Many were the candidates talked of, but ultimately the Brougham Club fixed their affections on John Muir, Esq., D.C.L. Oxon., and LL.D. Edinburgh, and the opposite party concurring, that gentleman was unanimously elected on Friday last.

Dr. Muir, who held for many years a civil appointment and judgeship in India, is a great scholar, and especially versant in the Sanskrit and allied languages. He bestowed £4000 in founding a chair of Sanskrit in our University, so that he has given tangible proof of his zeal for her interests.

The discussions at the Council were not of much general interest. The professors have, since getting rid of the incubus of the Town Council, shown a somewhat grasping tendency, as was to have been expected, but the Council are slowly and gradually testing their powers and asserting their rights.

The session was formally opened to-day (Monday) by an address by Sir David Brewster, the Principal. Among the audience I observed Prince Alfred, the young Prince of Hesse, Lord Elcho, Dr. Alexander Wood, and most of the Professors.

Sir D. Brewster, the Principal of the University, alluded, in his opening address, to the new hall it is intended to erect for the accommodation of about fifty students, and promised that it would be open by next session. I have reason to think that this will not be easily accomplished, as there are unavoidable delays about the site; but a dining-room for students might be got ready. The hall is not intended to compete in any way with the present modes of accommodating students, the number being too small to have any effect upon the 1500 who matriculate. On the contrary, it is believed that the hall will have a very beneficial effect upon the interests of the higher class of persons who receive students, as it is expected the building will attract more students from England and the colonies than it can accommodate, as it will be open to members of all the faculties. And there seems no reason in such a case why private houses or halls receiving four or more students to board and lodge should not be affiliated to the college hall, under suitable regulations, as is done at Oxford and Cambridge, I believe. This would be a great advantage to those persons in Edinburgh, particularly of the Profession, who receive students to board and lodge; for they would not only have their houses well filled, but gain in respectability and authority by such an official connexion.

I understand a very large number of candidates came up to the preliminary examination at the end of last month. Up to this date (November 8) 313 Medical students have matriculated, being 100 below 1860-61 at the same date last year, and 13 below the number of last year. Many more will doubtless enter this week.

On Saturday night, Mr. Connell, Professor of Chemistry at St. Andrews, died. A fracture of the leg which sapped his never very strong constitution many years ago, had compelled him to nominate an assistant. He had only just succeeded in getting his pension under the Act of 1858, which he has lived but a short time to enjoy.

Mr. Benjamin Bell has just been elected President of the College of Surgeons. Mr. Bell is one of that family which has for generations supplied Edinburgh with Surgeons. He is much respected by his Professional brethren, and was at one time President of the Medico-Chirurgical Society. He is one of the three Examiners (along with the Professors) for Medical Degrees in the University.

There are various features I love to look upon here. Every Medical student has an occasional spare hour, and when I went the other evening into Professor Aytoun's crowded class-room, I saw many refreshing themselves with the wit, the geniality, the eloquence of that Professor. So I find the Medical wards more crowded, or appearing more so, because they crowd more. I find books treating of principles more than details—such as Laycock's—now in the hands of many.

Our early winter is here a dreary time, nothing beautiful offers itself to our view; the pleasant summer is behind us and the winter to come, but we know that at 9 a.m. many hundreds of strong young fellows yearning "for something to do" will be in the quadrangle.

Dr. Andrew Wood has been re-elected as representative of the College of Surgeons in the Medical Council. A ready speaker, an excellent man of business, active in everything, a "*lignum vitæ*;" in short, the College are lucky in securing him. Dr. Alexander Wood has also been re-elected, but *he's* always being re-elected. It remains to be explained how he is in Fife or elsewhere to-day, and everywhere else to-morrow, and yet like another Physician, not far from him, with bright black eyes and flowing hair and gentle smile, has always time to see poor people, to speak "the kind word," and give the timid student an encouraging pat on the back.

Every one looks serious as we begin the session; we are all teachers here; various interests are commingled, but so far as the anxieties are concerned, they will all be blown away by the first good norther, and we are even now well settled down to winter's work.

GENERAL CORRESPONDENCE.

◆

ALLEGED PESTILENCE IN PLYMOUTH.

Letter from Dr. J. C. Cookworthy.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the leader of your Number issued on the 7th inst., you do me the honour to notice my Report presented to the Governors of the "Plymouth Public Dispensary" on the 27th ult., and to class me with Drs. Christison and Hughes Bennett, and are pleased to stigmatise what we have severally written on sanitary measures as "a mean outcry against them, only worthy of the lowest parochial agitation."

Having thus spoken, you will not deny me an opportunity of showing how little I deserve the imputation cast on me.

You start with the proposition "that the moral of Dr. Cookworthy's statement is this"—"sanitary measures are costly and useless," and putting these words within commas, you lead your readers to think the words are mine. They are yours, however, not mine. I never uttered or entertained the sentiment they express, nor would any one here for whom the Report was written, draw from it such a "moral."

In my reports presented quarterly to the Committee and Governors of the Dispensary are to be found the very opposite opinions, *e g.*:—

(November 30, 1860)—"No sooner did the colder weather in the latter end of October confine the aged and infant poor to their crowded, imperfectly-ventilated, and ill-washed dwellings, than typhus or typhoid fever showed itself, and other zymotic diseases became more fatal."

Again (March, 1861)—"A fact which proves that such deaths (from fever) are, for the most part, 'preventible,' and calls for the active interference of a wise and watchful administration."

Again (June, 1861)—"The localities in which the greater part of the deaths from small-pox and fever occurred, would indicate the propriety of a vigilant sanitary inspection." Then a suggestion is made for improving "the atmosphere of many abodes of wretchedness,—an arrangement the more necessary now that the hot weather has set in, and the town does not give to the poor wherewith 'to wash and be clean.'"

Again (October, 1862)—"A fact proving beyond question that sewerage and drainage, the widening, paving, and cleansing of streets, are not alone sufficient to secure the public health. There is another prime necessary of life, but so long as men having an abundance of water for themselves will combine with others who feel not the want, to prevent a constant supply of pure water, at high pressure, to all, we cannot hope to improve the uncleanly habits which a deficient water supply has caused and fostered. Independently of the importance of pure water as food, when the abode of man, his person, and clothes are insufficiently washed, the emanations from all these poison the air he breathes, and make it unfit for healthy life, and hence arise zymotic death in every form, and that not less destructive malady, consumption."

The foregoing quotations from my Dispensary Reports show that I do not think "sanitary measures are useless."

Then as to the "moral" which you draw from my last Report. You must excuse my expressing surprise that a practised writer should not have distinguished between certain sanitary measures and sanitary measures collectively.

On hearing that some of our neighbours at Devonport were desirous to have the provisions of the Health of Towns Act applied to their town, on the ground of its alleged high rate of mortality, I wished them to see, by way of caution, what the application of these provisions had done for us in that respect.

Our local Board entered on its duties in July, 1854, and since then has borrowed and raised by rate nearly £170,000, and yet the average mortality—aggregate and zymotic—of the last five years, no one of them a year of exceptional severity, has been a trifle higher than the average of five years twenty years ago. Had the results been different—had our death-rate been reduced, as at Salisbury, to ten per thousand in the year, should we not have given to the Board the credit of the improvement? And since the zymotic mortality, which it was especially the office of the Board to abate, has increased rather than lessened, may we not say that its measures have failed to attain the end sought for, without denouncing all sanitary measures as costly and useless?

But I would go farther, and say that sanitary measures, good and necessary in themselves, may prove worse than useless if not accompanied by others, *e.g.*, an elaborate system of sewerage without a sufficient supply of water, as in Plymouth.(a) If the contents of a sewer be not rapidly discharged, they ferment, decompose, and give out gases destructive to health and life; and if the house-drains communicating with the sewers be not well trapped or impenetrable by vermin, they convey the atmosphere of the sewers into the abodes of men, and every rat-hole opens a path-way for the entrance of death.

And now to the point at issue. Why is it that our outlay of £170,000 has not, as at Salisbury, reduced the zymotic mortality of the town? The answer would appear to be chiefly that we have not given to the inhabitants at large the water they ought to have for food, cleanliness of person and dwellings, and for flushing their drains, without which no sanitary measures can be efficient or successful.

(a) The water supply of Plymouth is, as a rule, for two hours on alternate days. Accordingly, those who have not tanks keep the water they use in pitchers and tubs, absorbing the atmosphere of ill-ventilated rooms.

That my Reports (approved and circulated from time to time by the governors of the Public Dispensary) were not intended or regarded as an "outcry against sanitary measures," but, on the contrary, to prove the importance of them, I subjoin the concluding sentence of the Report presented on March 17, 1863:—"Surely if a Local Board of Health have any mission, one of its chief objects would appear to be to inquire whether zymotic or "preventible" deaths are most rife, and to use their best efforts to ascertain, and, as far as practicable, to remove or lessen the probable causes.

At the same time, I am not so sanguine as to believe that all zymotic death can be prevented by sanitary measures. Still, it is as clear to me as the sunlight (and I speak with the confidence that experience gives, and which experience only can warrant) that much, very much, may be prevented by wise and consistent sanitary measures. Years may pass away ere the bad habits, which the neglect of such measures may have caused and fostered, be improved; but neither that consideration nor the ignorance, selfishness, and other evil passions of opponents should prevent the effort being perseveringly made. I am, &c.

J. C. Cookworthy, M.D.

20, Princes-square, Plymouth, November 10.

DRAINAGE, WATER SUPPLY, AND HEALTH IN SALISBURY.

Letter from Mr. A. B. Middleton.

[To the Editor of the Medical Times and Gazette.]

Sir,—The relation of a few particulars of what has been done here, and of the mode in which it was accomplished, may be acceptable to your readers, as bearing upon the discussions about sanitary laws now going on in many places. Twelve years ago, as a member of the Medical Profession, having witnessed the ravages of cholera, and for some years previously aware of the deplorable state of this city with regard to all sanitary arrangements (several attempts to rouse the local authorities to some large and comprehensive operations having failed), I caused the Public Health Act to be applied. Violent opposition was met with—so much so, that it was found impossible to obtain the signatures of one-tenth—the number then requisite—of the ratepayers to a petition for inspection; indeed, not sixty names could be got, although many of the principal residents, including the late bishop and present dean, set the example; whilst, I believe, more than 400 signatures were obtained to a counter-petition. The urgency of the case having been represented to him, Dr. Southwood Smith induced the Board of Health to send an inspector under the special clause in the Public Health Act, on account of the mortality exceeding 23 in 1000. At that time the sewerage was partly by means of channels or small rivulets in the streets, derived from the river Avon, generally about two or three feet wide, often offensive by day, and always so by night, and partly by means of cesspools. The water-supply was from wells, very shallow, and in very many cases so close to the cesspools as to be contaminated with the filth therefrom; indeed, after heavy rains, the water in these wells was often so tainted as to be evident to the sight and smell. Upon going round with the inspector, I found that many persons fully believed in the excellence of the water yielded by their wells, when, upon examination, it proved to be discoloured and stinking; in fact, good water was all but unknown. The subsoil of the city, naturally moist, was rendered much more so by soakage from the rivulets before mentioned, which, although lined with bricks, were never water-tight. It may be added that many people obtained water for domestic purposes from the often filthy channels. The three great evils, then, were—bad sewerage, bad water, and wet subsoil. The annual mortality for many years averaged about 27 in 1000.

The works done under the powers of the Act were: (1.) Subsoil drainage, so that not only are the foundations of the houses dry, but cellars can be made. (2.) Good sewerage by means of brick main drains and earthenware pipes. (3.) Plentiful supply of good water, pumped from an excellent well in the chalk, to a height of 140 feet above the city level, thus affording good pressure; amongst other advantages, most useful in extinguishing fires; the quantity pumped is about 500,000 gallons daily; the average mortality for eight years since the works has been about 21 in 1000; the average annual number of deaths, excluding cholera, for eight years before drainage was 243; for eight years since only 193, an actual average difference of 50 each year.

The total cost of the combined works for drainage and water supply was £27,000—rather the larger half for water-works. This money was borrowed on the improvement rate system, the principal and interest to be paid off in thirty years; the annual rate for this purpose is about 15d. in the pound.

Such are the main circumstances of the sanitary reform movement in Salisbury; that the works done entirely caused the diminished mortality I do not presume to assert, but the period of eight years is long enough to justify the belief that some relation of cause and effect exists between the facts; at all events, such consecutive facts are remarkable enough to demand the careful attention of all sanitary reformers. Upon this point I may be allowed a quotation from a pamphlet circulated by me during the contest twelve years since,—"In all human probability, instead of a mortality of 27·7 in 1000, you will have one-third less." One-fourth less having been attained, I trust that the further diminution will be realised.

The registration district from which the foregoing figures are taken is that of the three city parishes, consisting of an entirely urban population of about 9000. The return for the last quarter of only twenty deaths in this district, although no general sanitary deduction can be drawn from so short a period, is very worthy of observation by itself, as occurring in a quarter so unhealthy in London and throughout the country. I find in the Registrar-General's Report, amongst all the districts, rural and urban, not one instance of so low a death-rate,—indeed, the usually healthiest rural districts present rates during the last quarter double that of Salisbury, many towns treble, and some towns even more than quadruple that rate.

Taking out of the 20 deaths 6, namely, 1 of 13 years, 2 of 2 years, 1 of 8 months, 1 of 4 months, and one of 24 hours old, the remaining 14 averaged exactly 63 years. Six respectively being 84, 79, 76, 76, 73, 73. One other remarkable fact—two out of the twenty died from injuries.

In conclusion, it may be added that the channels having been obliterated, the carriage-ways in the streets have been re-formed, and the footways repaved, so that storm waters pass rapidly away, and Salisbury is now one of the dryest cities in England. I am, &c.

The Close, Salisbury, November 11. A. B. Middleton.

REPORTS OF SOCIETIES.

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ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 10.

Mr. Partridge, President, in the Chair.

The President drew the attention of the Members to certain alterations in the ventilation of the room. He alluded to Mr. Wheatley's catalogue of the portraits in the Soden Collection, and stated that Dr. Wright had presented a valuable series of photographic Medical portraits to the Society.

After some remarks by Mr. Arnott, on the advisability of keeping distinct the photographs and engravings,

Dr. A Rowand read a paper

ON THE TREATMENT OF FROSTBITE BY FRICTION WITH SNOW, FOLLOWED BY INCISIONS.

The method adopted by the author is as follows:—After reaction had been induced by careful friction with snow, incisions were made into the diseased structure. This treatment was adopted by the author in two cases, the details of which he gave. He further remarked that incisions were useful, not only in preventing inflammation and mortification caused by too great reaction, but by setting the blood in motion also, when it has been stopped by the action of the cold, and should be employed consequently at an early period.

Mr. Holmes Coote gave a case of

CANCEROUS INFILTRATION OF THE ENTIRE PENIS—SECONDARY DEPOSITS.

A man was admitted into St. Bartholomew's Hospital, under the care of Mr. Coote, with cancerous infiltration of the entire penis. It was found that he could not inhale chloroform without showing alarming symptoms of collapse. In the course of a month he died. On examination afterwards, it was found that the whole penis was occupied by soft cancerous deposit; that there was a cancerous ulcer of the bladder; cancerous deposits in the lungs and bronchial glands, and several of the bones. The head was not examined. The heart was in a state of extreme fatty degeneration.

In reply to the President, Mr. **Coote** said that there was no enlargement of the inguinal glands, but there was of the glands in the pelvis. The phymosis was not congenital.

Mr. **Fergusson** wished to hear the opinion of members of the Society as to the precise significance of the words primary and secondary in reference to cancer. Scirrhus of the breast (he said) was limited in its range of diffusion. It secondarily affected the axillary glands, but rarely spread to distant parts. He thought it would be of great importance to define more accurately the meaning of the term secondary cancer. Was it meant that cancerous matter was actually carried along the veins to distant parts? He himself would suggest that both the primary and the secondary, so-called, deposits of cancer were due to the same general condition of the system. He concluded by remarking on the interesting and unusual nature of Mr. Coote's case.

Mr. **Shaw** said that the interest of the case lay in the cancer being scirrhus, and not as is generally the case in cancer of the penis, epithelial. Epithelial cancer was not wont to infiltrate the penis, as in this case; and, again, epithelial cancer generally affected the inguinal glands, which this did not. He differed from Mr. Fergusson as to the diffusion of scirrhus cancer being limited.

A **Member** referred to a case recorded by Dr. Warren, of Boston, in which cancer of various forms infiltrated the penis. He considered that Mr. Fergusson's suggestion was an important one, and asked the opinion of eminent microscopists as to the possibility of recognising the elements of cancer in the blood.

Mr. **Moore** was surprised to hear that the subcutaneous injection of morphia caused so much pain. He referred to cases in which it had been used after painful operations, before the patient had recovered from chloroform, with great advantage.

Dr. **Jenner** agreed with Mr. Fergusson that the word secondary was not used with any very definite meaning. We talk, he said, of secondary cancer, but never of secondary tubercle. As a pathological anatomist, he agreed entirely with Mr. Fergusson.

Mr. **Coote** replied that the subcutaneous injection of a strong solution of morphia, as practised at the Middlesex Hospital, had been found extremely useful in alleviating severe pain in cancerous as well as in other diseases, and he could not account for the fact of the patient disliking the measure in this particular case. In answer to Mr. Fergusson's objection to the use of the term "secondary" cancerous deposit, he would observe that he used the words "primary" and "secondary" solely in relation to time. He was not aware that microscopic examination had confirmed the idea that cancerous elements could be detected in the blood of those suffering from this disease. Indeed, he thought it more than probable that the formation of such morbid deposits was due to deviations from the ordinary course of normal development in the solid constituents of the body.

Mr. **Arthur E. Durham** on a case of

MUCOUS CYST ON THE LARYNGEAL ASPECT OF THE EPIGLOTTIS, SEEN BY THE LARYNGOSCOPE, AND SUCCESSFULLY TREATED BY INCISION.

The patient, a very intelligent lad, aged 11 years, was admitted into Guy's Hospital, under the care of Dr. Wilks, on June 10, 1863. He had for three years suffered from gradually increasing impairment of voice, and difficulty of breathing and swallowing. On admission all his symptoms were very severe: he complained of pain, increased by pressure, about the larynx; he did not breathe freely; his voice was reduced to a low whisper; solids seemed to stick in his throat, and he could only swallow liquids with difficulty. During the night of the 14th he was seized, as he had previously been on several occasions, while asleep, with a very severe attack of dyspnœa. Tracheotomy was upon the point of being performed, but was delayed by the desire of Dr. Wilks, and on the following morning Mr. Durham was requested to make a laryngoscopical examination. On doing so, the epiglottis could not be distinguished in its normal form, but instead there appeared a large, round, tense tumour, projecting backwards and downwards, and completely covering in and concealing the glottis. On either side and rather behind this, portions of the aryteno-epiglottidean folds could be seen, swollen and apparently œdematous. The tumour could be just reached by the finger. Feeling certain that it contained fluid, Mr. Durham, with the concurrence of Dr. Wilks, at once proceeded to make an incision into it by means of a long, curved, sharp-pointed bistoury, partially surrounded with sticking-plaster. The incision was followed by a sudden gush of thick glairy mucus, mixed with a little pus and blood, which, on subsequent examination, proved to be precisely similar to the contents of a ranula beginning to suppurate. All the patient's symptoms were at once relieved, and in the evening he was singing in his bed. In the course of a few days he was perfectly well. Examinations were made from time to time, and it was interesting to watch the gradual subsidence of the œdema, and the return of the parts to their normal condition. The patient was last examined nearly four months after the operation; he was in every respect well. There was no appearance of the cyst (for such evidently was the nature of the tumour), but the cicatrix of the incision could be just distinguished on the lower part of the laryngeal aspect of the epiglottis.

Dr. **Morell Mackenzie** observed that the case brought forward by Mr. Durham was extremely interesting, and he believed unique. Though we might naturally expect to find muco-cystic polypi in the larynx, they seemed scarcely ever to occur, and he had never seen a case of the sort with the laryngoscope, nor was there any such case in the museums of the London Hospitals. He had met with cases of chronic œdema of the larynx, in which the symptoms and even the laryngoscopic appearance were very similar to those related in the present case. In estimating the value of recorded cases in which growths have been removed from the larynx, it must be borne in mind that there are two principal kinds of operations. In one of these the growth is actually brought away, and can be seen after its removal; whilst in the other the growth is not brought away, but its base is cut through and it falls into the larynx. The former happens when forceps are employed; the latter when cutting instruments or wire-loops are used. In order that this latter class of operations should have the value of scientific facts, the previous existence of the growths ought to be verified by more than one acknowledged laryngoscopist. The testimony of those quite unaccustomed to the use of the laryngoscope is of no use in such cause. He had always found in demonstrating the laryngoscope that novices would see almost anything he described to them. Under these circumstances, he thought that in all those operations where growths were removed by instruments which did not bring anything away, the previous existence of the excrescences required the verification of at least two laryngoscopists.

Mr. **Holmes Coote** thought that Mr. Durham's description ought to be accepted as accurate, as he was not likely to make a mistake in examining the larynx or any other part of the body.

Dr. **Palfrey** thought that Dr. Mackenzie had not followed the paper. The point was not should the larynx be examined by several observers, but that the instrument enabled us by a simple operation to relieve a severe condition of the larynx, which otherwise would have necessitated tracheotomy.

Mr. **Arnott** said that several years ago he removed part of a cyst which projected externally below the os hyoides. Its attachments were deep, so that he could not remove the whole of it. He considered that Mr. Durham's description of his case was quite correct.

Mr. **Solly** said that one very satisfactory point was that the relief was permanent; the sac did not refill, the operation having been done on June 15, and the boy being now quite well.

Mr. **Birkett** remarked that the fluid had been examined by the microscope. He felt disposed to class the tumours with ranula.

In reply to the **President**, Dr. **Mackenzie** said that in the case of œdema of the larynx that he had related, the symptoms had entirely disappeared three days after the operation. Dr. Mackenzie said that his remarks as regards the verification of cases did not apply to Mr. Durham, whose observing powers were of a very high order. In Mr. Durham's case, after the incision, a glairy mucus had come away; his remarks especially referred to cases of excrescence in which the growth was supposed to drop into the windpipe.

Mr. **Durham**, in reply, said he thought Dr. Mackenzie could scarcely have seen a case of œdema, or he would not have doubted the diagnosis. The swelling was large, rounded, nearly filling the larynx, and big enough to interfere with swallowing. The reason why the cyst had not refilled was that inflammation had occurred, and it had quite closed. The boy was now quite well, and his future progress should be communicated to the Society.

OBITUARY.

WILLIAM BREWER, Esq.

On the 14th ult., at St. Mary's Hill, Monmouthshire, William Brewer, Esq., Surgeon, formerly of Newport, Monmouthshire, expired at the patriarchal age of 90 years. His illness was, comparatively speaking, short. He kept his bed ten days, after a bilious attack, similar to what he had frequently before suffered, but which the usual remedies did not allay. He passed from time to eternity without pain or struggle, dropping quietly to sleep.

Mr. William Brewer was a good example of the old-fashioned provincial Practitioner, traversing a district of forty and fifty miles on his horse, through all weathers, to attend all comers, payment apocryphal, and often, after returning from a ten or twenty miles' ride, finding a message to take him a journey of some fifteen or twenty miles in another direction. And he never hesitated to go where required, for in those days Surgeons were not so plentiful as now.

Mr. Brewer was born in Newport, Monmouthshire, where his family—old and respected residents—had always occupied a prominent position. As a pupil of Abernethy, the latter not only taught him, but was a firm friend during life, and he always employed him to prepare his subjects for his anatomical lectures during his residence in London; he was also a friend of the late Sir Astley Cooper. Had he remained in London, which Abernethy wished him to do, he would, no doubt, have obtained there an excellent position; but he preferred his native town, and for a long term of years, in conjunction with his brother, Mr. John Brewer, of Caira (many years dead), carried on a laborious and successful practice—in fact, the practice for a district of very many miles round.

He became a Member of the Royal College of Surgeons in 1796, and, although entitled to the degree of Fellow when the regulations were altered, he had given up all care for titles. Soon after his settlement in Newport, although then young, he was elected one of the coroners for the county of Monmouth without opposition.

In the improvement of Newport he took an active part, and in 1809 was appointed one of the Commissioners for the improvement of the town. In 1819 he was elected Mayor, and re-elected in 1825. In the same year he, with others, started the Newport Gas Works, the first in South Wales. During a long series of years he took part in all local affairs, at the same time attending to his extensive practice, his duties as coroner, and as Medical Officer for the poor for a large district of the surrounding country.

The magisterial bench occupied a large portion of his time, and yet by management he found time for all, and kept up much hospitality. In the year 1839 the Chartist riots in Newport took place, and there, during the 3rd and 4th of November, Mr. Brewer, as alderman and magistrate, was at his post awaiting the attack. During the long and weary examination of prisoners consequent on this affair, he took his share, and many had to thank him for their escape from the penalties, as he would have none committed unless on the most certain evidence. At the same time he was himself a strict Conservative and Churchman. Soon afterwards he partially retired from borough affairs, still, however, attending to his practice, coronership, and acting as magistrate.

The office of coroner he filled for fifty-one years, with credit to himself and satisfaction to the county: always gentle and kind, and invariably in doubtful cases giving the benefit of the doubt to those in need of it. Becoming feeble in body, about two or three years ago he resigned the office, to which his son, Mr. W. H. Brewer, Surgeon, of Newport, who had been his deputy for years, was unanimously appointed. Before his resignation, it was generally thought that after such a service, the county ought to have marked their appreciation of it by a retiring pension (it would only have been required for a few years); but whilst, as individuals, all approved, none moved for it. His family never asked for it. Still, after fifty-one years' service in such an office, it would have been but little to a county like Monmouthshire to have voted £300 per annum, had they only taken example by the city of London, etc. In his case it was required, as all the savings of a hardworking life, which would have been a very handsome fortune for his family, had been lost in an unfortunate speculation in an iron works in Monmouthshire. Still he did not want, for his family—to whom he had given the highest education at Harrow and other schools—with what remained from other sources, maintained him in comfort and affluence to the day of his death.

As a magistrate, he was, while strict and just, inclined to a merciful view of all cases. As a coroner, nothing but the most definite evidence would cause him to bring a verdict of censure or committal. As a Practitioner, in his younger days he was an expert Surgeon, a good anatomist, and one of the few Monmouthshire Surgeons who could operate for cataract. In the diseases of women and children he stood high, as do his son and nephews, all Practitioners in the county. As Medical attendant on the poor, he was kind and gentle, frequently giving from his purse many necessaries, and, like his tutor Abernethy, he would crack a joke in his own dry, peculiar way. The last few years of his life have been passed quietly with his family, at St. Mary's-hill, whither he retired after leaving active life.

Known throughout Monmouthshire, and associating with the highest in the county, and respected in the lowest purlieus of Newport, where his duty often led him, some may ask, what books or papers did he write? So far as known, none; he was one of the practical class, observing and carrying into practice the results of experience, and instructing his many pupils, some of whom have attained eminence in their Profession. He was upwards of 85 years when he nominally retired; but even in his retirement the old Adam remained, and nothing gave him greater pleasure than administering to his humble neighbours. Few of the Profession have led so long, so laborious, and so healthy a life; one great part of it arose from his temperance and abstemious diet, and also from his unruffled temper. His widow, above 80 years of age, still survives, and enjoys fair health, residing with her son and daughter at St. Mary's-hill. After a well-spent life, he has laid himself down to rest.—*Hereford Times.*

MEDICAL NEWS.

University Intelligence.—University of London, 1863.—Names of Candidates who have passed the Second M.B. Examination :—

First Division.—William Henry Axford, King's College; Henry Charlton Bastian, M.A., University College; James Beddard, Guy's Hospital; Julius St. Thomas Clarke, Guy's Hospital; Arthur Wellesley Edis, Westminster Hospital; James Gwyther, B.A., Manchester Royal Infirmary; Gwynne Henry Harries, King's College; John Wale Hicks, St. Thomas's Hospital; John Talfourd Jones, University College; Henry Thomas Lanchester, St. Bartholomew's Hospital; Frederick John Money, St. Thomas's Hospital; Philip Henry Pye-Smith, B.A., Guy's Hospital; Walter Rivington, B.A., London Hospital; Frederick Thomas Roberts, B.Sc., University College; William John Smith, University College; George Thomas Mitchell Southam, St. Bartholomew's Hospital; Thomas Stevenson, Guy's Hospital; John Henry Wood, King's College.

Second Division.—John Cooke, University College; Athenodore De Negri, University College; Henry Stanley Gale, King's College; James Jackson, London Hospital; John Thomas Mercer, Guy's Hospital; Rickard Patrick Burke Taaffe, St. Bartholomew's Hospital.

Royal College of Surgeons of England.—The following Gentlemen having undergone the necessary Examinations for the Diploma were admitted Members of the College at a meeting of the Court of Examiners on the 17th inst., viz. :—

Edward Bellamy, Balham; Charles Henry Ralfe, Cambridge; and Francis Fox, Kilburn, students of King's College. Charles Franklin, Maida-hill; John Thompson Dickson, Clapham-park; and Henry Skey Muir, M.D. Univ. of Glasgow, Gloucester-place, Regent's-park, of Guy's Hospital. Alfred Lewis, M.D. Edin., Haverstock-hill; William Hugh Jameson, M.D. Edin., Caistor, Lincolnshire; and Richard Lord, M.D. Edin., Crewe, Cheshire, of Edinburgh. Arthur Mussen, M D. Queen's Univ., and L.S.A. Dub., Lisburn, Co. Antrim; Henry Cox Wilkin, Dublin; and Richard Taylor Geoghegan, Birkenhead, of Dublin. William Lewington Barker, Hungerford, and Thomas Murray, Trinidad W.I., of St. George's Hospital. John Crampern Rosselloty, Watford, Herts, and Mordey Douglas, Sunderland, of University College. Robert Vaux Ziuzan, Hindon, Wilts, and Henry William Adrian Saudell, Wood Green, of the

London Hospital. Alfred Grace, Donnend, near Bristol, and Alexander Waugh, Corsley, Wiltshire, of Bristol. Walter Haxworth, Barnsley, Yorkshire, of Leeds, and Pierre Joseph Desiré Lebrun, M.D., Belgium, Brussels.

Admitted on the 18th inst., viz.:—

Solomon Charles Smith, Halifax; George Elkington, Birmigham; Henry Gilbert, Birmingham; and James Sherwin Greene, St. George's, Shropshire, Students of Birmingham. Michael Beverley, M.D. Edin., Seething, Norfolk; Alfred Phillipps, Bridgwater; John Sherwin, Upwell, Norfolk; and Arthur Shears, Isleworth, of King's College. Montague Frederic Evershed, L.S.A., Billinghurst, Sussex; George Wall, L.S.A., Stourbridge, Worcestershire; Frederic Charles Mudd, Chichester; and Edward Reynolds Ray, Dulwich, of Guy's Hospital. Charles Edward Martin Shaw, Crewkerne, Somerset, and Charles Frederick Burnard, Plymouth, of St. Bartholomew's Hospital. Henry Thomas Marriatt, Colston Bassett, Notts, and William Trent Bennett Hamlyn, Plymouth, of University College. Sam Haigh, Leeds, and William Ackrill Stamford, Beverley, Yorkshire, of Leeds. Patrick Byrne, Manchester, and William John Stott, Manchester, of Manchester. Saunders Barton Haliday, Dublin, and James Atkinson, Hyde, near Manchester, of Dublin. George Fox Grosvenor, M.D. Edin., Alsager, Cheshire, of Edinburgh.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, November 12, 1863:—

Edward Bryan, Frisby-on-the-Wrealle, Leicester; William Bale, Teviot Dale, Stockport; Thomas Holyoake, Kinver, Staffordshire; George Starling, Hebe-cottage, Charlton; Henry James Wintle, St. Paul's Bristol; Thomas Bradford Killingworth, University College, London; George Richards, Chirk, North Wales.

The following gentlemen also on the same day passed their First Examination:—

Alfred Paget Evans, Sydenham College, Birmingham; Ralph Barnham, Westminster Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Althaus, P. J., M.D., has been elected Fourth Physician to the *Royal* Infirmary for Asthma, Consumption, etc., City-road.

Balchin, **Richard**, M.R.C.S. Eng., has been elected Mayor of Godalming.

Black, **Cornelius**, M.D. Lond., has been elected Mayor of Chesterfield.

Brodie, Sir B. C., Bart., F.R.S., has been appointed one of the Examiners for the Degree of Bachelor of Medicine at the University of Oxford.

Brunton, **William R.**, M.R.C.S. Eng., to be Honorary Assistant-Surgeon to the 1st Surrey Rifles.

Embleton, **Dennis**, F.R.C.P. Lond., has been re-elected Representative of the University of Durham in the General Council of Medical Education and Registration.

Fearnley, **George**, M.D., has been elected Mayor of Dewsbury.

Gabb, **John**, M.R.C.S. Eng., has been elected Mayor of Bewdley.

Holdsworth, **Samuel**, M.R.C.P. Lond., has been elected Mayor of Wakefield.

Mason, S., M.R.C.S. Eng., has been appointed House-Surgeon to the Infirmary, Teignmouth, Devon.

Miller, **Walter W.**, M.D. Aberd., has been elected Mayor of Eye, Suffolk.

Monro, **Henry**, F.R.C.P. Lond., has been appointed one of the Examiners for the Degree of Bachelor of Medicine at the University of Oxford.

Ogle, **John W.**, M.D. Oxon., has been appointed one of the Examiners for the Degree of Bachelor of Medicine at the University of Oxford.

Ridley, **Richard B.**, L.R.C.P. Edin., has been elected Mayor of the Borough of South Shields.

Roden, **William**, M.D. St. And., has been elected Mayor of Kidderminster.

Rolleston, **George**, M.D. Oxon., has been appointed one of the Examiners for the Degree of Bachelor of Medicine at the University of Oxford.

Scattergood, **Thomas**, M.R.C.S. Eng., has been elected Surgeon to the Hospital for Women and Children, Leeds.

Smith, H. I. S., has been appointed one of the Examiners for the Degree of Bachelor of Medicine at the University of Oxford.

Truran, **Thomas**, M.R.C.S. Eng., has been elected Mayor of Truro.

Wilbe, **Richard H.**, M.D. St. And., has been appointed Surgeon to the St. John's-wood and Portland Town Provident Dispensary.

DEATHS.

Bywater, **J. Hall**, M.R.C.S. Eng., at Knottingley, Yorkshire, on November 9, aged 45.

Lovegrove, **Washington**, L.R.C.P., at Hastings, on November 12, aged 26.

Martin, **Peter**, M.R.C.S. Eng., at Reigate, Surrey, on November 14, aged 52.

Turnbull, **John**, M.D. St. And., at Dunbar, Scotland, on November 9.

Vernon, **James D.**, M.D. Glasg., at Tobercurry, Co. Sligo, recently.

Mr. Green.—The readers of this Journal will be glad to learn that the health of this esteemed member of the Profession is so much improved that his friends have been enabled to remove him from his temporary lodgings to his own residence.

The Hunterian Museum.—This collection has just had a very interesting and valuable addition made to it by Mr. Henry Christy, F.L.S., of Victoria-street, who has presented a skeleton of that rare animal the Manatee (*Manatus Australis*).

The London Fever Hospital.—Her Majesty the Queen has sent the sum of £50 to the Committee of this institution, as "a donation towards enabling them to meet the extraordinary demands upon their resources, which appear at present to press upon them."

Lancashire and Cheshire Branch of the British Medical Association.—The first course of lectures instituted by this society will be delivered at the Medical Institution, Mount Pleasant, Liverpool, by A. T. H. Waters, M.D., M.R.C.P., on Monday, November 23, Monday, November 30, and Monday, December 7, at eight o'clock, p.m. Subject: "On the Mutual Relations of Physiology, Pathology, and the Practice of Medicine."

Society for Relief of Widows and Orphans of Medical Men in London and its Vicinity.—This society, which has existed just seventy-five years, and relieves by half-yearly and other grants the widows and children of its own members, has determined to apply to the Queen in Council for a Royal Charter of Incorporation. We cordially acknowledge the wisdom of this step, for the society will receive more efficient powers for its own management than at present it has, and we are certain that it will rise in public estimation, as being well suited to relieve the wants of their widows and orphans, who, whatever rank the husbands and fathers hold in the Profession, are very often left in considerable distress on the death of those husbands and fathers. An advertisement in our Journal of to-day informs our readers of the day on which they may be proposed as members.

St. Thomas's Hospital.—A General Court of the Governors of this Institution was held on Tuesday, at the Terminus Hotel, London-bridge. The minutes of the proceedings of the Grand Committee were read and accepted. Among the transactions thus approved by the court was an agreement on the part of the treasurer, acting for the Hospital, to purchase for £95,000 from the Metropolitan Board of Works a site consisting of land at Stangate to be hereafter reclaimed from the river. It was stated by Mr. Tite, in answer to a governor, that the question of site, as far as that court was concerned, was now settled, and it only remained for the approval of the Court of Chancery. Upon the requisition of a governor, the conditions of the agreement for the purchase of the site were read, from which it appeared that the Metropolitan Board of Works undertook to reclaim the land from the river, to level it, to embank it four feet above Trinity high-water mark, and to erect a parapet of not less than three feet six inches in height. The land to be handed over to the governors of the Hospital on or before December 31, 1865.

Guy's Hospital.—The following Prizes were awarded by the Treasurer in the Anatomical Theatre in the presence of the Medical and Surgical staff, and a numerous gathering of students:—Third Year's Students:—Edward Whitfeld Thurston, Ashford, Kent, the Treasurer's Gold Medal for Clinical Medicine; Edward Whitfeld Thurston, the Treasurer's Gold Medal for Clinical Surgery; Edward Whitfeld Thurston, First Prize, £40; E. Baxter Forman, Derby, Second Prize, £35. Second Year's Students:—Henry G. Howse, Reading, First Prize, £35; Second Prize of £30, not awarded. First Year's Students:—Henry Denne, Sandwich, First Prize, £30; James Rawlings, St. Pinnock's Rectory, Liskeard, Second Prize, £25; William Arthur Brailey, Rochester, Third Prize, £10 10s. (presented by one of the Governors); John Gill, Weston, Hawkstone, Shrewsbury, Honorary Certificate; Henry S. Taylor, Alton, Hants, Honorary Certificate; Frederick Edward Manby, East Rudham, Norfolk, Honorary Certificate. Entrance Examination in Classics, Mathematics, etc., October, 1863:—William Betts Giles, First Prize, Frederick Taylor, Second Prize, George Rootes, Honorary Certificate, Arthur Bowes Elliott, Honorary Certificate, Matthew Owen Coleman, Honorary Certificate.

Mistaken Charge of Drunkenness.—A case has lately occurred which illustrates the necessity of a Medical examination in all cases of alleged drunkenness. A man supposed to be drunk was arrested by the police, and charged at the station with drunkenness and violent conduct. The reply made on the part of the prisoner was, that he was the subject of epileptic fits, and that in his case the fits were not followed by stupor, but by a condition of delirious excitement. It was proved before the magistrates that the conduct of the man, attributed by the police to intoxication, was, in fact, the result of the disease under which he laboured, he at the time not having recovered from one of his attacks. The man was therefore discharged. The moral of this case is, that in every instance of alleged drunkenness the police Surgeon should be sent for to examine the person on his being first brought to the station, and, drunkenness being proved, the Surgeon's fee should be paid by the prisoner as part of his penalty.

IMPORTATION OF SMALL-POX AND SCARLATINA INTO NEW ZEALAND. — Very great alarm has been occasioned throughout the colony by the arrival of several vessels from England with small-pox on board. The first ship which brought the disease was the *Victory*, from Glasgow, which arrived at Port Chalmers (Otago) on July 12. The passengers were put in quarantine, the larger proportion of them being placed on a small island appropriated to the purposes of a quarantine station in the harbour of Port Chalmers. Four deaths in all have occurred among the passengers by the *Victory*, and thirteen cases. After a stay of several weeks at the quarantine station, the whole of the passengers have been released, with the exception of a few convalescent patients whose term of probation has hardly expired. The next infected ship was the *New Great Britain*, from the Clyde to Bluff Harbour (Southland province). This vessel had five deaths during the passage from small-pox, and fifteen cases. The ship has recently been admitted to pratique, and the passengers cleared. The *Mataura*, arrived from the Clyde at Port Chalmers on September 15, had ten deaths during the passage, and six passengers were ill on her arrival. The deaths had not all occurred from small-pox, only one having resulted from that disorder. Thirteen cases of small-pox occurred during the passage, and one patient died. Scarlet fever also prevailed. This ship has been placed in quarantine. The most recent case is that of the ship *Tyburnia*, which arrived at Auckland on September 4. Small-pox broke out ten days from England, and during the passage nine serious and twenty-six mild cases of the epidemic occurred. There was only one death from small-pox. As yet I have heard of no case of the disease in the colony, although, if it should break out, the consequences would be most disastrous. At present no Compulsory Vaccination Act exists in New Zealand, and I know that the vaccination of children is sadly neglected. The Otago authorities have been the first to take steps in the matter, and a Vaccination Bill is now in course of discussion by the Provincial Council, and very probably the example will be followed by the other provinces. — *New Zealand Correspondent Times, November* 17.

BELFAST BRANCH OF THE ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.—On Wednesday, the usual quarterly meeting of the committee of this local branch of the above Society was held in the rooms of the Ulster Medical Society, 33, High-street, when Dr. Patterson was requested to fill the chair. Dr. Stewart, Honorary Secretary, reported that, since the committee last met the annual report of the meeting of the Parent Society, held in Dublin, had been published, and which was a most able and interesting document. According to the Report, grants were made of the available funds for that purpose, to the several parties whose cases had previously been minutely inquired into, the number of whom was seventy-six, but ten of which had been disallowed. The sum in hands to be distributed was £570 8s. 1d., being £62 more than last year, which made the grants to average between £8 and £9 each, the highest grant being £22, and the lowest £3, which latter sum, though so very modest in amount, was still a boon to its recipients, and was so received. The number of cases recommended by this branch was four, and all were, as usual, as liberally dealt by in the allocation of grants as the limited means at command enabled. Nothing could be more business-like, or more carefully and impartially managed at head-quarters, than the funds of this Society and their distribution, which is universally admitted; and the Chancellor of the Exchequer himself might learn a lesson from those excellent and able Professional men to whom is entrusted the Society's fiscal and general management, and who devote an amount of their valuable time in the discharge of their voluntary and laborious duties in connexion therewith, which speaks volumes for their most disinterested philanthropy; and it is only to be regretted that both the Profession and those who are "clothed in purple and fine linen" who are not of the Profession are not more liberal and ready in placing larger means in their hands, in furtherance of the objects of a society which is so all-important, and deserving of the warm and generous support of every member of the Profession in particular, and every member of the general community whose heart throbs for those who are enduring adversity silently, and who once knew better days. Some subscriptions, with donations of £5 each from Dr. Knox, Strangford; and "Anonymous," having been reported as received, and the remaining business disposed of, the meeting separated.

BOOKS RECEIVED.

A New Operation for Artificial Hip-Joint in Bony Anchylosis. By L. A. Sayre, M.D., Albany, New York. 1863.

⁂ Two cases are given, in one of which tenotomy with forcible extension was employed, in the other the "ex-section of a semicircular segment of bone above the trochanter minor." Recovery with an artificial joint occurred after the latter operation.

A Remarkable Case of Deception. By Lewis A. Sayre, M.D., Albany, New York. 1863.

⁂ Dr. Sayre appears to have exposed an imposture of the grossest kind. A woman, aided by her Medical man, professed to secrete charcoal on the skin and to pass masses of it per vaginam. She was also stated to have no rectum or urinary passage. All these statements were found to be false, and Dr. Sayre issues the present pamphlet because the imposition is being again attempted.

Introduction to Anthropology. By Dr. Theoder Waitz. Edited by J. Frederick Collingwood, F.R.S.L., F.G.S., F.A.S.L., Honorary Secretary of the Anthropological Society of London. London: Longman, Green, Longman, and Roberts. 1863.

⁂ This work, which is issued under the auspices of the Anthropological Society, shall receive notice before long.

Excursion Chirurgicale en Angleterre. Par A. Courty, Professeur à la Faculté de Médecine, Chirurgien-en-Chef de l'Hôpital Général de Montpellier, etc. Paris: Asselin. Montpellier: Coulet. 1863.

⁂ We have already laid before our readers translations of copious extracts from this charming memoir, and can only advise them, now that it is published, to procure and read this sketch of English Surgery from so genial and philosophical a pen.

Edinburgh Medical Journal. November, 1863. Edinburgh: Oliver and Boyd.

⁂ This number opens with a good paper by Dr. Seller on the distinctions between delirium tremens and other effects on the mind of excessive drinking. Dr. Christison's recent address on public health is given *in extenso*. Dr. Grainger Stewart contributes a case of dilatation of the lacteals. Altogether the contents are of the highest scientific value.

The Dublin Quarterly Journal of Medical Science. November, 1863. Dublin: Fannin and Co.

⁂ Mr. Porter gives some good Surgical cases with illustrations, and Mr. Spence, of Edinburgh, records the removal of a large tumour in the neck. Dr. Little's case of pneumothorax without perforation illustrates a very rare pathological condition, and a case of paralysis caused by working in compressed air in sinking the foundations of Londonderry new bridge is of great interest.

The Madras Quarterly Journal of Medical Science. July, 1863. London R. Hardwicke.

⁂ This publication is mainly devoted to such Medical topics as concern Practitioners in a tropical climate, and of whom many are in charge of European troops or settlements; besides these there are notices of the new chinchona plantations, a memoir by Dr. Brodrick on Constitutional Syphilis, and much information likely to interest the general reader. The contributors appear to be principally Europeans.

Morbus Coxarius. By Lewis A. Sayre, M.D., New York. 1863.

⁂ Two clinical lectures, reprinted from the *American Medical Times*.

The Principles and Methods of Medical Observation and Research for the Use of Advanced and Junior Practitioners. By Thomas Laycock, M.D. Second Edition. Edinburgh: Maclachlan and Stewart. 1864.

On the Influence of Mechanical and Physiological Rest in the Treatment of Accidents and Surgical Diseases. By John Hilton, F.R.S., F.R.C.S. London: Bell and Daldy. 1863.

Father Mathew. A Biography. By J. F. Maguire, M.P. London: Longman and Co. 1863.

Asthma, Consumption, and Bronchitis Treated by the Water-cure and Air-bath. By William Macleod, M.D. London: R. Hardwicke. 1863.

Transactions of the Pathological Society of London. Vol. 14. 1863.

A Dictionary of Chemistry. By Henry Watts, B.A., F.C.S. Part 9. London: Longman and Co. 1863.

Explorations in the Interior of the Labrador Peninsula, the Country of the Montagnais and Nasquapee Indians. By Henry Y. Hind, M.A., F.R.G.S. Two Vols. London: Longman and Co. 1863.

Variola Ovina, Sheep's Small-pox; or, the Laws of Contagious Epidemics. Illustrated by an experimental Type. By William Budd, M.D. London: T. Richards. 1863.

Urine, Urinary Deposits, and Calculi; and on the Treatment of Urinary Diseases. By Lionel S. Beale, M.B., F.R.S. Second Edition. London John Churchill and Sons. 1864.

From Matter to Spirit; the Result of Ten Years' Experience in Spirit Manifestations. By C. D. London: Longman and Co. 1863.

The Morningside Mirror. Nos. 1 to 12, Vol. 18.

Montpellier Medical. Novembre, 1863. Montpellier: Boehmet, Fils.

Pharmaceutical Journal. November, 1863. London: John Churchill and Sons.

The Edinburgh Veterinary Review and Annals of Comparative Pathology. November, 1863. Edinburgh: Maclachlan and Stewart.

Journal of the Workhouse Visiting Society. October, 1863. London: Longman and Co.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Exhibitioners and Prize Men of the London University at Guy's Hospital, University and King's Colleges, and other Schools.—Our attention has been called by a correspondent to a paragraph in the *Medical Times and Gazette* of October 24, from which it is thought an inference may be drawn that the students of Guy's Hospital have acquitted themselves better at the University of London than those of other Schools and Hospitals. Whilst Guy's has done well, however, the following numbers will show that its students have at least not surpassed those of several of its rivals. In the M.B. Preliminary Scientific Examinations of 1861, 1862, and 1863, 3 exhibitions were obtained by University College, 1 by Guy's, 1 by St. Thomas's, and 1 by Edinburgh. In the First M.B. Examinations of 1860, 1861, 1862, and 1863, 8 exhibitions and medals were awarded to University College, 6 to Guy's, 5 to St. Thomas's, 1 to Charing-cross, and 4 to Edinburgh. In the Second M.B. Examinations for the same years, 5 scholarships and medals were obtained by University College, 10 by King's, and 5 by Guy's.

A Constant Reader.—The Universities of Rostock and Giessen give degrees *in absentia*, but only to gentlemen of high Professional standing.

Dr. Bishop's Disinfecting Process.—Some weeks ago a notice appeared in this Journal that the Town Council of Leeds had so far sanctioned the use of a disinfecting agent invented by Dr. Bishop, a Medical Practitioner of that town, as to place at his disposal two of the largest wards in the borough, in order that the efficacy of his mode of treating the refuse of dust-heaps and animal excreta might be fairly tested. We are informed that the agent he uses is a cheap disinfecting powder, possessing the property of preventing the decomposition of animal and vegetable matters, and of fixing the gases formed during the putrefactive process. The committee appointed by the Leeds Town Council to investigate the matter, obtained not only evidence from various persons who had used the agent, but a report from a sub-committee to whom were confided the task of experimenting with the powder on some of the worst middens in the town. The conclusions at which the committee arrived, after the reception of the report, were,—That Dr. Bishop's process seems almost perfect in its deodorising power, and that it may be made applicable to every kind of privy or ashpit at a comparatively small expense. The manurial power of animal excreta is said not to be diminished by Dr. Bishop's process. We are now informed that a company, entitled the "Leeds Economic Sanitary Company," has been formed, to utilize on a large scale Dr. Bishop's invention. As we are not aware of the composition of Dr. Bishop's powder, we can give no scientific opinion as to its probable efficacy, but we heartily concur in the desirability of deodorising and utilising the fæcal and refuse matters of cities and towns, and we shall be glad to hear that a more extended trial than Dr. Bishop's process has hitherto had may prove that he has overcome the difficulties of the problem.

SANITARY IMPROVEMENTS IN THE COLONIES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In reply to a letter, signed "Inquirer," in your last Number, I refer him to articles Jamaica, Trinidad, and Barbadoes, in last two Blue Books. He can there read for himself all the sanitary improvements, even to the new and good water supplied to the troops at Barbadoes, through the instrumentality of Dr. Gibson himself. There is no necessity for occupying your valuable space in letters on the subject.

N.B.—The statistics were up to 1860 only.

I am, &c. H. B. FRANKLYN, M.D., Surgeon 10th Foot.

Kilkenny, November 14.

GENERAL PRACTITIONER'S CHARGES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Is there any general practitioner's code of charges to which reference can be made? I have recently settled in this benighted district, which shall be nameless, and find the charges are most arbitrary, especially with reference to the poorer classes. One Surgeon will charge merely for attendance (medicine inclusive or not), another charges only for medicine, and a third will charge for both medicine and attendance. Mr. Jones (G.P.), will charge 3s. 6d., Mr. Brown (G.P.), 2s. 6d., and Mr. Robinson (G.P.), 1s. 6d. to persons in similar circumstances. Surely there ought to be some uniformity in the charges made to each class by general practitioners; for undoubtedly, as a rule, the pecuniary advantage which ability ought to have should be derived from increase of practice, not from increase of pay. Of course, there must be some margin left for extras.

It appears to me that a uniform charge for attendance, inclusive of medicine, and for advice (consultation) inclusive of medicine, applicable to the three great classes of society—lower, middle, and upper—is the desideratum. The charge for medicine savours too much of the shop, and possibly leads to over-drugging, though it must be acknowledged that the poor seem to prefer being charged for medicine rather than for attendance. Still, if medicine must be charged, the charge ought to be invariably the same, even if some latitude is allowed in the charge for attendance. If one Surgeon charges 1s. for a blister, and another 2s. 6d., it is not surprising that complaints are continually being made as to the difference of Medical charges—of Dr. This charging very high, and Dr That very low, etc. If you can enlighten me on this matter I shall be much obliged.

I am, &c. A YOUNG GENERAL PRACTITIONER.

P.S.—I enclose my card.

⁂ We do not agree with our correspondent that "the pecuniary advantage which ability ought to have should be derived from increase of practice not from increase of pay." You would not expect to pay the same fee to Mr. Briefless that you would have to give the Attorney-General.

COMMUNICATIONS have been received from—

A YOUNG GENERAL PRACTITIONER; MR. J. HARESCEUGH; UNIVERSITY OF LONDON; MR. A. B. MIDDLETON; DR. A. T. H. WATERS; DR. BALMAN; A CONSTANT READER; DR. G. R. IRVINE; DR. SWALLOW; MR. HENRY MARRIOTT; MR. T. MASSEY HARDING; MR. G. C. CLARK; MR. JOHN FOSTER; DR. JOHN D. HILL; ETHNOLOGICAL SOCIETY OF LONDON; ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 14, 1863.

BIRTHS.

Births of Boys, 1066; Girls, 995; Total, 2061.
Average of 10 corresponding weeks, 1853-62, 1683 0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	721	736	1457
Average of the ten years 1853-62	645·8	608·0	1253·8
Average corrected to increased population..	..	..	1379
Deaths of people above 90	..	2	2

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	..	1	16	3	6	9	5
North ..	618,210	6	5	31	2	4	24	..
Central ..	378,058	4	4	19	..	6	8	1
East	571,158	2	1	27	2	2	15	1
South ..	773,175	6	10	28	6	10	27	7
Total.. ..	2,803,989	18	21	121	13	28	83	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·791 in.
Mean temperature	41·6°
Highest point of thermometer	53·3
Lowest point of thermometer	27·9
Mean dew-point temperature	39·1
General direction of wind	S.W.
Whole amount of rain in the week	0·33 in.

APPOINTMENTS FOR THE WEEK.

November 21. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

23. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8½ p.m. Lettsomian Lectures.—On Midwifery and Diseases of Women. Lecture I.—Classification of Fibrous Tumours—Varieties, including Pelvian Bodies—Intimate Structure—Transformations by softening, hardening, absorption, &c. By C. H. F. Routh, M.D.

24. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

ETHNOLOGICAL SOCIETY, 8 p.m. Rev. G. Rome Hall, "On the Aboriginal Occupation of North Tyndale and Western Northumberland." "Account of the Weddos, or Widdos" By a Tamil Native of Ceylon.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8½ p.m. Dr. Wm. Ogle, of Derby, "Supposed Abdominal Tumour; a Stick Ten Inches long Introduced into the Bowel, per Anum." Mr. T. P. Salt, of Birmingham, "Description of a New Truss." Mr. H. Thompson, "Difficult Case in Lithotomy from Distortion of the Pelvis by Rickets."

25. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m

26. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

27. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

ORIGINAL LECTURES.

LECTURES
ON
THE BLOOD, LYMPH, AND CHYLE OF VERTEBRATA,
DELIVERED AT
The Royal College of Surgeons of England,
DURING THE SESSION OF 1863.

By GEORGE GULLIVER, F.R.S.,
Professor of Comparative Anatomy and Physiology to that College, and late Surgeon in the Royal Regiment of Horse Guards.

LECTURE V.—*On the Chyle—Liquor Chyli—Fibrin of Chyle and of Blood—Fibrin and Bradyfibrin, and Early Step to Organisation—Morphological Elements of Chyle—Molecular Base—Analogies and Homologies.*

THE anatomy and physiology of the chyle is of very great importance, as it involves the fundamental processes of nutrition and sanguification. And it is the more interesting because the characteristic molecular base of the chyle, on which I had been vainly insisting for nearly a quarter of a century, at length appears as the very key-stone of the molecular doctrine, now so well illustrated at Edinburgh by Professor Hughes Bennett, and in London by Professor Beale. Besides, the existing knowledge of the chief morphological elements of the chyle has not yet been generally and fully realised in this country, and still less so on the Continent. The Germans lump their descriptions of the chyle and lymph together, as if they were essentially one and the same fluid, and describe in them granules, nuclei, colourless cells, and red corpuscles; but it does not appear that the real import or value either of the molecular base or of the secondary molecules has even yet formed an essential part of their system.

The *Liquor Chyli*, in which all these corpuscles exist, is a colourless limpid fluid, a mixture of albumen and fibrin, much diluted with the water by which they are held in solution while their liquidity continues, and capable, by virtue of the fibrinous part, of coagulating spontaneously like blood. But, owing to the less proportion of fibrin, the chyle-clot is regularly softer than that of blood, particularly in chyle before it has reached the thoracic duct. It is commonly stated that chyle of the inferent lacteals contains no fibrin, whereas the fact is that chyle from the inferent lacteals will sometimes coagulate spontaneously. In nine different trials of chyle from lacteals on the intestines, I saw distinct coagulation within five minutes in three instances, and no coagulation in the other six; and in twelve similar experiments on chyle from the lacteals in the mesentery, but before they had reached the mesenteric glands, there was also coagulation, but in rather larger proportion; namely, in half the cases. Thus, though coagulation did not occur in quite half these cases, it took place in a smaller proportion,—in Carnivora, for these experiments were made on a lynx, and on cats and dogs. In three observations on the horse, there was coagulation within seven minutes in one of the trials of chyle from the lacteals before they had reached a mesenteric gland. After the chyle has passed the glands it coagulates regularly in Man, as well as in Carnivora and Herbivora; and chyle from the receptaculum chyli forms rather a firm clot very quickly. In any case, but not always, the chylous fibrin may present a fibrous structure; and the clot encloses within its meshes more or less of the corpuscles previously swimming in the liquor chyli, though the serum surrounding the clot commonly retains a more or less milky appearance, from the presence in it of a large part of the molecular base. Moreover, these observations on the fibrin and molecular base of animal chyle are applicable to the latex of certain vegetables. (*Medical Times and Gazette*, November 29, 1862, and February 14, 1863.)

Fibrin of Chyle and Blood.—Chemical diagnostics have not yet been clearly established between the fibrin of different fluids; but there are differences which should be made the subject of further research. Thus, the fibrin in the chyle of the thoracic duct and receptaculum chyli coagulates much more rapidly when let out than that of blood, and is remarkably less prone to putrefaction. The clot of chyle-fibrin will keep quite fresh, without the least trace of evolution of ammonia, for several days after the clot of blood-fibrin, kept side by side for comparison, has commenced to give out an offensive odour, and when a dense ammoniacal vapour may be made very plain by the caustic lime and muriatic acid test. Indeed, so remarkable was this difference of putrescence, as regards the time required, as to force itself on my attention in numerous experiments in the summer of 1840, when many instances occurred in which fibrin of the blood was far advanced in putrefaction upwards of three days before this process had commenced in the fibrin of the chyle, both set aside at the same time, and near together, for comparison.

FIG. 20.

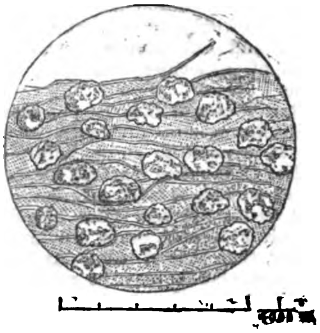


FIG. 20.—Clot of chyle, showing the fibrils of fibrin, and the corpuscles, after the molecular base had been washed out.

Fibrin and Bradyfibrin, and Early Step to Organisation.—And this reminds us of the so-called bradyfibrin or fibriogenous substance, of which a description has recently been imported from the Continent, and accepted here upon apparently insufficient proof. The fibrin of lymph is particularly adduced as an example of this fibriogenous matter, which is said to be an imperfect or immature fibrin, coagulating slowly, or not at all, except under the influence of atmospheric air, and less prone to putrefaction than perfect or blood-fibrin. But, if we have not already perceived that these characters are untrue to nature, we shall soon see that they are special distinctions without corresponding differences. It is true that, in starved animals, the lymph, even of the thoracic duct, may coagulate but tardily, or even fail to coagulate at all; and such is the case also in lymph of the distant or peripheral lacteals and lymphatics of well-fed animals. Now, in these well-fed animals we have just mentioned the rapid coagulation, and yet slow putrefaction, of chyle from the thoracic duct or receptaculum chyli; and the lymph from these vessels, while the molecular base of the chyle is disappearing, likewise coagulates quickly and putrefies slowly.

In the course of several experiments made during the years 1840 and 1841, without the least view to any sort of theory, I was surprised to observe this constant difference between the time required for the coagulation of liquor chyli and liquor sanguinis. Chyle from the thoracic duct of the horse sometimes coagulated almost instantaneously, and regularly in less than half of the time required for the coagulation of the blood. In dogs, chyle from the same vessel as regularly coagulated before the blood, though with less comparative rapidity. And in a man suddenly killed an hour or two after supper, though not examined until the following morning, the still fluid chyle when let out from the thoracic duct formed a complete clot within nine minutes; while some blood from the right side of the heart, in which there was then no coagulum, when similarly exposed to the air, did not show any sign of coagulation before the expiration of seventeen minutes. In this case also the chylous clot remained without any putrefaction after that process was well advanced in the blood-clot. Thus, then, the liquid of the thoracic duct, either during the plentitude or diminution of the molecular base of the chyle, certainly coagulates more quickly than the liquor sanguinis, contrary to the definition of this very example given by the continental physiologists of their so-called fibriogenous substance. Nor are two of its other given characters, namely, slow coagulation and putrefaction, more consistent; for the quickly coagulating fibrin of the thoracic duct putrefies more tardily than the slower coagulating blood. And, as to the agency of atmospheric air or foreign matter, we have before noticed (*Med. Times and Gaz.*, Fig. 13, Feb. 14, and

Hunterian Oration, 1863,) that there will never be any coagulation in two varieties of serum exposed in separate jars, though a clot will soon form therein after they have been poured together. The serum also of chyle and lymph, when mixed with another variety of serum, may induce coagulation, as I have proved experimentally. And, as so often noticed in the course of these Lectures and in the Hunterian Oration, this coagulation, by mere contact, of two varieties of serum is a central and comprehensive phenomenon, lying at the foundation of the earliest steps to organisation before cell-genesis; for, notwithstanding the well-known efficacy of cells as predisposing or catalytic agents, they are by no means the fundamental efficient in the coagulation of mixtures of serum. When this primordial condition has been well and generally realized, a better knowledge of the further and certain truths of the molecular and cell doctrines, and of the immense importance both of molecules and cells, will follow as a matter of course.

Finally, as tardy coagulation is presented as a leading diagnostic of this fibriogenous substance, are those physiologists who admit it prepared to go on multiplying the species of fibrin according to the time required for its clotting? The blood of the same animal, as man, coagulates more slowly at first than at last during the very same bleeding. The blood of the mouse coagulates much more quickly, and that of the horse more slowly, than that of man. And it has long been known that its coagulation may be retarded or suspended by means which do not change its chemical composition. The agency of cold in this respect is a familiar example, of which no physiologist has yet supposed that it is due merely to the influence either of oxygen, atmospheric air, or subtraction of foreign matter. When we retard coagulation for half an hour or more by a low temperature, would any one maintain that the fibrin was thus specifically transformed, by a retrograde process, from a higher to a lower type, from a perfect or mature fibrin to an imperfect or immature fibriogenous substance? And so we may dismiss this question.

(To be continued.)

ON THE

FALLACIES OF THE STATISTICAL METHOD AS APPLIED TO MEDICINE.

BEING THE HUNTERIAN ORATION FOR 1863, DELIVERED BEFORE THE HUNTERIAN SOCIETY.

By ROBERT BARNES, M.D.,

Fellow of the Royal College of Physicians, Obstetric Physician to, and Lecturer on Midwifery at, St. Thomas's Hospital.

(Continued from page 507.)

It must also be observed that with the progress of more correct Medical observation—unaided in most cases by statistics—new diseases are discovered, or, to speak more correctly, diseased conditions previously confounded under one common designation are analysed or decomposed, and shown to include diseases quite distinct in character. Thus, of late years diphtheria and embolism have been added to our nosology. Hitherto these, and doubtless other causes of death still undetermined, and not isolated from alien associations, have complicated and vitiated the mortality tables. At one time scarlatina and measles were confounded. Piles of statistics have been rolled together in the hope of elucidating the nature of fever. What is the result? Is there anything in pathology or treatment that is really proved or made clearer by the aid of all this labour? The characteristic of all the numerical disquisitions upon fever is to suggest questions, to solve which the labourer is obliged to go back where he can to the original observations; and where he cannot, to rest content with barren conjectures. So long as statistics were trusted to, the essential differences between typhus, typhoid, and relapsing fevers were effectually concealed. It was only when Dr. Jenner applied the instruments of comparison, of contrast to the facts he had minutely and industriously observed, that the multiform nature of "fever," the abstract unreal entity which had so long amused, and still amuses statisticians, was brought to light. Just as Hunter pursued a physiological problem, so has Dr. Jenner pursued and demonstrated the problem of fevers, both using the same instruments which have given us all our knowledge in natural history. It is especially worthy of remark that Dr. Jenner's facts were comparatively few in number, far too few for the construction of statistical tables, but enough for logical analysis, comparison, and differentiation, and the establishment of one of the most brilliant and useful discoveries of modern Medicine. We are all naturally inclined to judge of propositions which others submit to us by the light of our individual experience. We feel that we have a right to form a judgment concerning things which are directly within the sphere of our own observations. So I feel that I am entitled to form an opinion of the value of statistics in that department of Medical practice in which I am most actively engaged. I cannot help saying that in obstetrics I constantly find the teachings of statistics at variance with direct observation, with sound reasoning, and with good practice. If it were permitted me to dwell upon this point, I could show by manifold instances how despotically statistics have cramped the spirit of free inquiry and rational experiment, and have therefore retarded the improvement of obstetric practice. Statistics, accepted as the final expression of truth, have served to lull the indolent, amusing them with the semblance of knowledge, and have deterred the industrious from pursuing new and independent paths of inquiry. I may, I hope, without being accused of egotism, consult my own experience in this matter. If I have been enabled to throw any new light upon certain points in obstetric pathology, or to improve obstetric practice, it is because I was led by observation and reflection to doubt the results of statistics, to shake off the dogmas drawn from them, and to seek for knowledge at its source, in its elements, and not to eliminate it out of the conflict of a jumble of facts and falsehoods.

What I have learned from testing the uses of statistics in obstetrics by my own experience, I cannot doubt that Physicians and Surgeons have discovered, or may discover, in Medicine and Surgery. We must all have been struck with one fact. It is characteristic of the best and most cautious Medical statisticians that they mostly deal with a limited number of observations, because many good observations are rarely to be got. Thus limited, they are sure to fence round their deductions with so many doubts, reservations, and conditions, that nothing remains but the facts in their original individuality. They proceed, in short, to build up only to pull to pieces again. It is not "Opus superat materiem," but the reverse; the materials preserve their value, the statistical labour expended upon them is thrown away. If they are tempted, as young and ardent devotees of the numerical method commonly are, to seek for clearer and more definite utterances, they must extend their numerical basis by importing cases or facts less trustworthy, beyond their own means of verification, and so straightway soar aloft into the realms of imagination.

I hope I may be excused if I give a few more examples of the difficulty of solving Medical questions by statistics. Endless labour has been expended in trying to settle the question whether the fruit of consanguineous marriages are especially prone to certain forms of disease or of physical degeneration. This would seem to be a question peculiarly suited for statistical research. But observers refuse to yield their opinions to the statistics adduced. Indeed statistics are used with great apparent force by those who deny the influence of consanguinity, and by those who affirm it. This of course proves fundamental differences in the observations. The truth is, that the conditions involved are so numerous and so complicated as to defy the isolation and extrication of the one circumstance—consanguinity.

Again, by the accumulation of a large number of facts, showing the prevalence of fever in houses exposed to sewer emanations, it may seem to be established that the cause of fever lies in the decomposition of sewage. But if we accept this conclusion we shall be drawn away from the true philosophical task of attempting by close observation to trace the exact way in which fever is produced. Dr. Budd attempts this by the strict method of Medical observation, and he has gone further to satisfy the Medical mind than have annual volumes of blind statistics.

Again, it has been observed that tape-worm is most prevalent amongst sailors and others who are addicted to eating raw pork. This is a statistical expression, but it conveys no knowledge beyond the mere suggestion that there is a probable connexion between pork and tape-worm. To arrive at an intelligible and useful knowledge of the cause of tapeworm in the human subject we must still have recourse to direct Medical and zoological investigation. By this means the progress, migrations, and developments of the parasite under various forms, the most dissimilar in appearance, through various animals or hosts, are demonstrated.

Perhaps the most striking example of the use of statistics in elucidating pathology is the discovery that the ravages of cholera in London were in the inverse ratio of the elevation of the soil. But can such an expression as this satisfy the Medical mind? It still leaves the cause of cholera, and the conditions which modify its fatality, to be sought. This search can only be undertaken with a prospect of success by skilled observers. That mere elevation gives no security against the attacks of cholera is abundantly proved by the experience of other places than London. A great error of the statistical method is this. He who pursues this method, must, in order to get a simple and distinct entity capable of being added to others, decompose a disease, which is a complex thing, all whose parts or elements are inextricably linked together, and which in different cases bearing the same generic name may differ in kind, order, and degree. For example, Louis urges the following argument:—"On est forcé à moins de soutenir que pour bien connaître une maladie, il n'est pas nécessaire d'en connaître tous les éléments, de savoir si un symptôme y est fréquent ou rare, s'il a lieu dans tous les cas ou seulement dans un grand nombre." This and other arguments and processes of Louis and his school seem to indicate that the object is to define diseases, that is, to arrive at an abstraction that can serve for classification. But this is to leave practical medicine, and to wander into the regions of philosophical speculation.

It seems to me a most unnatural thing to decompose a disease, to take out symptom after symptom, to place them in separate columns, and add up these columns in the expectation of arriving at trustworthy conclusions that can be applied to the elucidation of the nature and treatment of disease. The skilled Physician is distinguished from the tyro or the routinier who have not advanced beyond the precepts or dogmas he has been taught, by this: like the tyro, he first of all conceives of a disease as a type or entity, constant, or nearly so, in its characters and essence; but then, unlike the tyro, he, enlarging his experience by keen and free observation, learns to recognise varieties of form or of complication, which modify the originally conceived type, and enable him to diagnose more correctly and to treat more successfully a greater number of cases. This is an art never taught by statistics.

But the greatest and foremost of all the objections to the statistical method is the apparent conclusiveness of its results. As we go on in a statistical research we leave fact after fact behind us, concentrating our attention more and more upon figures. We are in the end lost in pure abstractions. We have substituted mathematics for medicine, that is, we have abandoned the "conjectural art" for the only one that gives absolute demonstration. But it is vain to attempt thus to escape from the inherent quality of medicine. The medical mind is bound by the nature of its pursuits to reflect, to compare, to reason upon experience. It cannot seek refuge in computation or in mathematical formulæ. The statistical method means the oblivion of facts and the annihilation of reason. Mathematics suppose the addition and subtraction of like things; but the facts of biology can never be like, according to the mathematical requirement. The facts of biology must therefore be the subjects of the mental operations of thought, comparison, of reason.

To step aside for one moment from the path of Medicine, I would say that the advocates of statistics in science ought also to be the advocates of universal suffrage in politics. Hear what Sir George Lewis says:—

"Decision by the majority is unquestionably one of the clumsiest contrivances for securing rectitude of decision which can be devised. You may talk of the rudeness of monarchical government, but I defy you to point out anything in monarchy so irrational as counting votes, instead of weighing them; as making a decision depend, not on the knowledge, experience, or fitness of the judges, but upon their number. Nobody, in forming his individual opinion, ever resorts to such a test. No historian, in commenting on the vote of an assembly, ever says that the decision was made by the majority, and therefore it was right."

Substitute the word "facts" for "votes," and how apposite is the argument of the statesman to our inquiry!

I should be misunderstood, however, if my argument were assumed to be an absolute denial of the uses of statistics in Medicine. My aim is to limit their application to their legitimate sphere, and especially to warn against a danger still abroad, namely, that of overriding the teachings of direct skilled observation and reasoning by the crushing tyranny of figures. Freely as statistics are still resorted to, there are not wanting evidences of progress towards a more correct appreciation of their value than at one time prevailed. For example, Dr. Bright discovered by observation and reasoning the connexion between albumen in the urine and dropsy depending upon certain forms of diseased kidney. The humble service of statistics may be usefully employed to test the generality of this fact and to suggest new inquiries by drawing attention to apparent exceptions.

Enthusiasts and even sober men once thought that the numerical method was destined to lead to immediate and important discoveries in physiology, in pathology, and therapeutics. It is now acknowledged that the Physician must be content to labour on at the bed-side and in the dead-house. The true uses of statistics seem to be to suggest new paths of inquiry by observation—to test the truth of general principles. These applications are modest, indeed, but eminently useful. Statistics may be in some cases usefully employed as a convenient method of exhibiting or of expressing gross general results, but we must beware how we accept even these gross results as articles of faith. They must only be accepted provisionally. We must cherish the insatiable spirit of doubt, and use these gross results as starting-points for new inquiries, else there is an end to all progress.

If statistics could draw Truth out of her well, we might expect that almost every Medical problem would be speedily settled. The pathological history of mankind must surely present facts enough to be marshalled into statistical tables. But the sufficient proof that statistics are powerless in the matter is found in the circumstance that Medical philosophers are still compelled, as heretofore, to seek for truth by direct observation and reflection, and that they find this old process reward their labour.

Who does not know from his own consciousness how Medical knowledge and skill are gained? The mind informed and qualified for observation by acquaintance with the elementary Medical sciences, we witness a particular case of disease. This case becomes the subject of thought, and not seldom by itself it conveys solid instruction. We go on observing other cases, none, perhaps, like the first or like each other, but they all serve for mutual illustration—the training of the Medical mind and progress in Medical knowledge. It is by this slow process of study, by continually comparing and tracing the analogies and differences between things, that we come to grasp general laws, and are able to apply them to particular conditions. This kind of cumulative experience is very different from statistical aggregation.

From the moment that all the details of a case are eliminated, and their historical order and correlations disturbed or neglected, in order to squeeze out a few particular facts to form part of a statistical phalanx, we lose almost everything that is instructive. We all know that a single pregnant instance of a fact or experiment well observed is often absolutely decisive as to a physiological or pathological law. Reasoning may satisfy the mind; statistics, which almost necessarily fail by dropping some essential links of the chain of logical reasoning, appeal to the faith of ignorance, not to reason. If any one have a special claim to adopt the motto "Magna est veritas, et prevalebit," it must surely be the statistical school; so great is their faith, that they are not afraid to employ error in the service of truth; they look for light in darkness. The modern statistician seems to be a resuscitation of the ancient Pythogorean; like his prototype, he seeks to explain the secrets of Nature by the revelations of mystic numbers.

The opinion of Claude Bernard on the application of statistics to the study of Physiology is especially valuable. "Let me remind you," he says, "never to have recourse in biology to a method which is extremely useful in other sciences, but which would give in biology the most deplorable results. I allude to the method of averages; the excessive mobility of the conditions of life renders everything in the shape of calculation impossible; all exact calculation of physiological phenomena is at least premature. Up to the present time it has been an easier matter to observe facts than to calculate them; it is *qualitative* and not *quantitative* analysis which is required in Physiology."(a)

(a) *Medical Times and Gazette*, 1860.

People are apt to suppose that the statistical method of evolving general facts or laws from collections of individual facts is in reality the inductive method of Bacon. This is very far from true. Bacon's process of rising from particulars to generalisations is essentially a rational one. He proceeds by comparing and contrasting, and judging. He quotes with special approbation the following passage from the "Theætetus" of Plato:—

"Particulars are infinite, and the higher generalisations give no sufficient direction in Medicine; but the pith of all sciences, that which makes the artsman differ from the inexpert, is in the *middle propositions*, which in every particular knowledge are taken from tradition and experience."

Now, the very pith of the statistical method is to put particulars out of sight, thereby destroying the possibility of comparing them, of studying their relations and their differences. It excludes reasoning upon the significance of individual facts, which has led to all the great physiological and Medical discoveries. Statistics convert the human mind into a sort of machine that turns out moral, physiological, Medical dogmas as arbitrary and as ill-fitting as the work of the tailor of Laputa, who measured his customers by quadrant, rule, and compasses, and constructed coats and trousers on the soundest mathematical principles, but quite out of shape and ill-made notwithstanding.

Laplace has well said, that "a knowledge of the method adopted by the man of genius is quite as beneficial to the progress of science, and even to his own fame, as are his discoveries."

How are discoveries made in Medicine? Did a Physician or a Surgeon ever become great in his art by trusting to statistics? No; the solid reputation of Louis himself is not due to his statistical labours. Discoveries are made by men of native sagacity to detect the relations of things, of independent spirit to engage in patient observation and questioning of Nature. John Hunter, I need not say, was no statistician. Hunter worked out his massive and brilliant discoveries by the minute observation of the structures and organs of different beings, by exposing his facts, that is, his dissections, in a museum; not by burying them in statistical agglomerations. This he did to the end that he, and others after him, might trace the structures through individual beings and series of beings, according to their natural relations. In this manner, with his facts always before him, each one not alone answering for itself, but illustrated by comparison with other facts, he ranged them in the order of their complexity, beginning with the simplest form, and exhibiting the successive gradations of organisation to the most complex.

He thus evolved knowledge, and brought out discoveries, by a continual process of comparison and suggestion. The contemplation of one specimen, perhaps, or more frequently reflection upon the relations of two or more, would inspire his active and sagacious mind with a foresight of a new law. This would serve as a guide to further thought. He would bring to bear upon his inchoate idea the vast stores of his experience, marshalling all correlative facts in such order as to illustrate and to test its probability. Experiment and new dissections would be undertaken to fill up the gaps in the line of evidence. It was thus that he compelled facts—palpable, visible facts—to explain each other, to strengthen each other, and to yield up their common secret. His facts are still in his Museum. Take any one of his great works—the anatomy and physiology of the teeth, or of the embryo, for example. See how he arrives at his conclusions, how he builds up a generalisation by the gradual passage from the structures or "facts" of one animal to those of another; how Genius makes Nature speak.

How different is this from the blind fatalistic oracles of statistics, which cheat the senses with the ghost of truth, which suppress the elemental facts, and mock at reason!

Let it not be forgotten that Medicine is strictly a branch of natural history, and we shall clearly see that it can only be successfully studied in the same manner. "Non numerandæ, sed perpendendæ, sunt observationes," said Morgagni, the father of modern pathology, the Hunter of morbid anatomy.

So, then, let us, after the example of John Hunter, gather up the permanent traces of disease in museums, and preserve the memory of the fleeting reactions of the living body under external agencies, by recording faithfully the histories of individual cases of disease. Let statisticians, if they will, operate upon these records according to their fashion; they must depend upon us for the materials of their manufacture; that is a necessity of their existence. Let them count; let us weigh and study the true import of the facts we observe.

It is thus we shall preserve the traditions, and extend the reputation, of the Hunterian Society. Thus we shall most surely gratify that thirst after knowledge which is our main bond of fellowship, and the source of purest happiness; for thus we shall be best enabled to enlarge our power to lessen the sufferings of our fellow-creatures.

ORIGINAL COMMUNICATIONS.

◆

ON INFANTILE PARALYSIS.

By CARL HEINE, M.D.

Various Kinds of Paralysis—True Infantile Paralysis—Syn. Essential Idiopathic, Spinal, etc.—Symptoms of Invasion—Characters of Paralysis—Secondary Consequences.

When I enter on the examination of a most difficult and intricate subject like this, in a foreign country and a foreign language, my object is simply to bring before the scientific men of this country the results of the experience of a foreign author, which may be able to throw more light upon this matter; and, by submitting them to a comparison with the results obtained by English authors, to endeavour to render more intelligible the phenomena of a disease which so frequently up to this day has been misunderstood. I feel more especially induced to publish this paper, as I have read with great interest three articles on the same subject in the *Lancet* some time ago, which came to very different results from those I have to express here. They appeared neither to accord in their own views, nor to agree with the generally expressed opinions which, in one of those articles, are said to have been somewhat "thoughtlessly taken from the writings of Continental authors." I may be allowed to preserve from that reproach at least one of these Continental authors, viz., my father, Dr. J. de Heine, who first in a monograph, published in 1840, described one, and the most usual form of infantile paralysis as a particular disease, and whose essay representing the reply to an inquiry about this subject from England to the Medical men of all countries was the precursor of the most excellent works of Drs. Kennedy, West, etc., in England; Rilliet, Bouchut, Duchesne in France; and the Germans Romberg, Ammon, Vogt, Ross, and others.

He was enabled in 1860, in a new and much enlarged edition of his work, not only to confirm his original views as to the nature and seat of this disease, but also to give them a far stronger support. He recognised, besides, the necessity for distinguishing this kind of paralysis more carefully from other kinds of paralysis with which it had been confounded. Many authors satisfied themselves with considering all kinds of paralysis in infants as belonging to one and the same category, and knowing no distinction between cases of which in reality the only point in common is an accidental one—viz., that they all occurred in childhood—they transferred symptoms peculiar to one or another kind of infantile paralysis to all of them, so that their account was as vague as the name under which they united them.

It is certainly a most deplorable fact—and a great deal of the confusion in this question may be derived herefrom—that authors consider from a common point of view all the cases of loss of motor power in infancy as if they were mere variations of the same disease.

There exist different kinds of paralysis in infancy as well as in later periods, with entirely different origin, different appearances, and different importance. Their symptoms are so essentially unlike, that to separate them cannot be considered as an attempt to go too minutely into details.

The true infantile paralysis, to which I here particularly refer, is undoubtedly the most common form of paralysis in infants, and by far the majority of paralytic deformities belong to it, so that very often on cases of this kind the description of paralysis in infants in general appears to be founded. It is the paralysis which Rilliet called by the unfortunate name of "Essential Paralysis," and this name, I fully agree, "has been thoughtlessly taken from foreign authors." The same affection is "the Idiopathic Paralysis" of Bouchut (or, "the Rheumatic Paralysis" as others prefer to call it), although he included in that term other cases not strictly belonging to it. It is the "Fatty and Atrophic Paralysis" of Duchesne, who, as I know from personal knowledge, plainly discerns the peculiarity of this disease, and entirely agrees with my father in his principal views. It is, in short, the form of paralysis, the cause and starting-point of which my father, supported by Romberg's great authority, declared to be caused by a lesion of the spinal cord.

In the space of thirty-four years my father, at his large orthopædic establishment in Cannstatt, has had under his care nearly 200 cases of this particular form of disease, and about 250 cases of paralysis in infants of all kinds. It is only relying upon such a long and uninterrupted series of observations, and having shared in a great measure this experience, that I dare attempt to enter on the present discussion.

Varied as the interpretation of the pathology and the explanation of the cause appear to be amongst authors, equally remarkable is their harmony in describing the clinical history of the disease. They draw, wherever they describe cases of the same kind as my father's, with the same pencil, the same shadings, even almost with the same words, the typical portrait of the thoroughly characteristic symptoms. These symptoms, of high value for diagnosis, are briefly the following :—

At the earliest age, usually within the first two years of life, (rarely before the sixth, and rarely after the twenty-fourth month,) children, for the most part well-formed and in good health, are suddenly seized by an attack of fever, with general irritation, convulsions, and not seldom severe cerebral symptoms, frequently accompanied by disturbance in dentition, great restlessness, starting in sleep, and sudden screaming. The storm lasts only a short time, often not more than one night, and abates as it arose, or it is repeated a few times, and terminates as a rule by leaving a paralytic affection, usually severe and of large extent, affecting with preference the lower extremities. In some cases the onset is less intense, the feverish symptoms light, and, without suspecting the serious consequences, the parents discover in the morning when the child gets up that it lets one leg or one arm hang powerless. In a few cases a general uneasiness, occasioned by teething, precedes the attack ; complications with vomiting, diarrhœa, and cutaneous eruptions are rarely observed. The short acute or feverish stage ceases with the appearance of the paralysis, and the internal morbid process of which I shall speak later seems to cease.

The cerebral symptoms also, so far as they existed, disappear completely, and no longer constitute the slightest part in the disease. What may be the influence of dentition is difficult to state, yet I imagine that it is of more importance than any other source of irritation. Never (that is to say in no one of my father's 200 cases) has the affection been found to be congenital, and I feel induced to consider the supposition of a congenital defect of conformation (wherever it may be adduced) in children so healthy and vigorous, to be without exception an unfounded assumption. It frequently happens, it is true, that parents, especially after an interval of many years, are not able to recollect exactly the time of the first attack ; or that, having overlooked it on account of its being slight, they date the disease, without reflecting, from the time of birth. Even in such cases it is always possible, by affording a little time for thought, to find that the paralysis came on later than they had stated.

Severe and threatening as the phenomena of the onset sometimes appear, yet I know of no case in which death has been the direct result. Certainly, it not rarely happens that children die in the midst of violent paroxysms of fever and convulsions, but it is by no means justifiable to reckon such cases, merely from their general symptoms, amongst those of the form of infantile paralysis I am describing, so long as the characteristic loss of motor power has not ensued before death, unless the post-mortem examination demonstrates an organic alteration, which the quickly fatal result prevented from producing paralysis. These proofs, so far as I know, have never been brought forward in any of the adduced cases, nor have they, as it seems to me, in those mentioned by Mr. Holmes Coote in an article, where death occurred before paralysis had taken place in a stage when, as the author avows himself, "the real nature of the disease was scarcely understood."

It is evident, by the severe consequences themselves, that the lesion must be an extremely serious one, for it is reasonable to suppose that the internal derangement will be proportional to the severity of the symptoms, and this alone renders it impossible that the affection can be independent of any material damage to the nervous system, and proves that it must represent more than a mere disturbance in the functions of some peripheral nerves.

Usually, the paralysis extends, in the beginning, over a larger part of the body, sometimes over the whole trunk and the four extremities. In the highest degrees it maintains the territory at first seized. In others, the power of movement returns part by part, and this always at first in the more central or in parts situated higher. This is worth notice as a most remarkable fact, which my father constantly met even in the majority of the lightest cases. It deserves attention principally with respect to the circumstance, that one feels in later periods a great inclination to consider a loss of power confined to single sets of muscles, for instance, a paralytic club-foot, the history of which, perhaps, has not been ascertained as scarcely more than a purely local affection without any deeply founded significance. The recovery from the paralysis, when it occurs, however, stops after the lapse of from the first four to eight weeks ; the muscles still subjected to it in that period remain paralysed for life-time, and undergo subsequently consecutive alterations. A perfect recovery of motor power never takes place in this kind of infantile paralysis, and the incurability is one of its essential attributes. Cases recorded of speedy and complete recovery, are simply cases of rheumatic paralysis, as Bouchut and others described, but they cannot be associated with the class of cases here spoken of. The case to which Dr. Wilks refers, in the introduction to his article, belongs undoubtedly, as well on account of the evident history of its origin (the child sat for a long period at a window with his leg doubled under him), as from the most favourable and rapid result, to the class of rheumatic cases. It will be recollected, besides, that no symptoms of an acute and feverish attack are alleged.

The paralysis presents itself, with regard to its external seat, under three principal forms, which may be distinguished from each other ;—either it spreads over both lower limbs, as "Paraplegia Infantilis Spinalis," according to the name my father gives it ; or only over one, as "Hemiplegia Spinalis" (never in these paralyses is one whole side of the body—viz., the upper and lower extremity of the same side—found paralysed together ; such hemiplegias, in the real sense of the word, belong to another kind of palsy, indisputably due to cerebral lesion) ; or thirdly, as "Paralysis Partialis," limited to single sets of muscles of the leg or foot. In a small number one arm alone is paralysed. It rarely happens that the muscles of the back, which are more commonly found paralysed together with paraplegia or hemiplegia, under the form of paralytic lateral curvature of the spine, remain the only seat of the lesion.

Amongst 192 cases of infantile paralysis in general received into my father's establishment up to the year 1860, there were 158 cases of this spinal form ; and out of those, again, there were 37 cases of paraplegia, 34 of hemiplegia, and 84 of partial paralysis ; 2 cases of paralysis of arm, and 1 of paralytic lordosis. 80 cases were in male, and 78 in female children.

The paralysed limbs show more particularly the following characters :—They can be bent and extended in all directions without the slightest resistance or any possible influence of the will, and dangle very much like flails when they are not supported ; the skin and muscles are extremely slack ; the turgor vitalis is remarkably diminished. Subsequently a series of secondary alterations make their appearance. The turn of the disease begins by a decrease of temperature. This is perceivable at an early period by the mere touch of the hand. The limbs get gradually colder and colder, and the skin becomes of a red, or even sometimes of a blue colour, and with this exists a great disposition to chilblains in winter. The diminution of the temperature amounts in the worst cases, according to exact measurements, to 4° and 5° of Réaumur in the course of two years after the first attack. This phenomenon is very noticeable in comparison with other forms of paralysis in childhood depending on an evident cerebral affection, as well as on other causes, in which cases it scarcely exists at all. A comparison of temperature by the thermometer in the various kinds of paralysis afforded most interesting results, which time and space will not allow me more than to allude to here.

Closely connected with this symptom, and proceeding from the same cause, is the consequent arrest of development, the atrophy of the paralysed muscles.

The atrophy is not immediate and contemporaneous with the loss of motor power, as has been stated ; or, if it is, it escapes observation before the lapse of months. I had the opportunity of verifying this fact in a child with paralysis of the right leg, whom I examined four or five months after the attack. At that time not the slightest difference in the length and circumference of both extremities was apparent, whilst the temperature was found already to be a little lower in the paralysed leg. I saw the child again half a year afterwards, and then the affected limb was not only much colder, but also decidedly thinner and a little shorter than the healthy one. Such observations, which can be made in every case, are a sufficient testimony against those who still believe that these paralyses are consequences of previous and idiopathic muscular atrophy. This secondary atrophy sometimes goes very far; my father found in cases of hemiplegia that the circumference of the thigh and calf of the paralysed leg, after the affection had lasted four or five years, was smaller by eight to ten centimetres than that of the other limb. In the atrophied muscles, Duchesne discovered a retrogressive fatty metamorphosis of their elements, and he thought this phenomenon important enough to give the name to the disease. The same arrest in growth, but later than in the muscles, is visible in both the peripheral and longitudinal dimensions in all other tissues, the bones, vessels, and nerves. The bones cease to grow, insomuch that the shortening of a paralysed limb, after some years, may amount to from two to six inches; the patella is often a third smaller than it should be. The thin and atrophied arteries may be recognised by the small, thready pulse. The atrophy of the peripheral nerves has been shown by post-mortem examinations.

The sensibility in general does not suffer at all, or at least not in any remarkable degree, from this paralysis. This integrity of the sensitive nerves is of high importance, in so far as it seems to me to be a valuable argument against the assumption of a lesion of the peripheral nerves in the special cases I am describing, as in the nerve trunks sensitive and motor fibres are closely interwoven, and therefore an affection which so seriously injures the motor nerves could not easily fail to produce a similar disturbance in the functions of the sensitive nerves.

The electric irritability of the paralysed muscles is entirely lost, as has been plainly confirmed by Duchesne's large experience. The local application of galvanism, even of the strongest currents, does not produce the slightest muscular reaction nor anything else, but the usual sensation in nerves of the skin. Just the contrary will be observed in the cerebral paralyses of childhood with spasmodic character; here galvanic irritation produces the most intense contractions of the muscles, the children crying and complaining very much of pain. The loss of irritability in the former, and its increase in the latter cases is so constant and well-marked, that Marshall Hall proposed the use of galvanism as the best means of diagnosing these different affections. Hence follows how questionable will be the value of this remedy in the cases we are describing, a fact which hardly any practitioner now denies. In mild and recent cases only was I able to obtain a little improvement of motor power in those muscles which had been merely slightly touched by the paralysis, and to prevent by doing so their imminent atrophy. The same results have been obtained by Duchesne and others.

The appearance of deformities resulting partly from muscular retraction in consequence of the disturbed balance between paralysed and non-paralysed muscles, and partly from the pressure of the weight of the body upon the relaxed limbs, is one of the last symptoms in the series of consecutive alterations. The deformities which the paralysed limbs undergo in length of time are extremely variable. They reach in their greatest development a much higher degree than will be seen in congenital or any other deformities. In the worst cases, especially when both lower extremities are paralysed, several deformities occur together, and their number is larger as the area of the paralysis is more extensive. The most usual deformity which occurs relatively to other deformities in the earliest period is talipes equinus. It is produced by paralysis especially affecting the anterior muscles of the leg, so that retraction of the muscles of the calf ensues; talipes varus, when the peronei have been paralysed, is produced in the same way, and talipes valgus when these latter muscles retained more power than their completely paralysed antagonists, tibialis anticus and posticus; and talipes calcaneus when the triceps suralis (gastrocnemius and soleus) is chiefly paralysed. In the same way contractions of the knee are the result of a greater degree of paralysis in the extensors of the leg, whilst under the opposite conditions the limb presents the deformity called "recurved knee." In other cases the knees are bent inwards or outwards, and when the loss of motor power ascends higher up, contractions in the hip-joint and curvatures of the spine will be found. In paralysis of the arm, of the kind here described, retraction of muscles leading to deformities is exceptional. The reason may be partly that the affection, being more intense, strikes the antagonists on both sides nearly equally, and therefore there is no difference in the muscular power of the flexor and extensor; and again, partly what I believe to be of greater importance, that the paralysed arm, hanging powerless on the side of the body, by its own weight exercises a kind of self-extension, whilst it is not exposed to any pressure from the weight of the body.

The deformities begin to show themselves at the period when the little patients make their first attempts to walk. They begin to slide on the floor; make use of the little power left by the paralysis in certain sets of muscles; develop it as much as possible at the expense of their more or less paralysed antagonists, and thus themselves involuntarily aid the retraction of those muscles by continued unilateral exercise. The later the appropriate orthopædic remedies are applied, the higher is the degree of malformation, to which the paralysed limbs are subjected; and it is in such a neglected state that we not seldom meet such unfortunate individuals in advanced age, with limbs, entirely crippled and wasted, doubled under their unproportionally-developed trunks.

(To be concluded.)

ON UTERINE TENTS MADE FROM THE DRIED STEM OF THE LAMINARIA DIGITATA.

By J. G. WILSON, M.D., F.R.S.E.
Lecturer on Midwifery, Anderson's University, Glasgow; Physician-Accoucheur to the Glasgow Lying-in Hospital, etc., etc.

It is now more than a year ago since Dr. Sloan, of Ayr, first directed the attention of the Profession to the dried stem of sea tangle as a substitute for tents in ordinary or common use. Since then, through the kindness of Dr. Sloan, I have had ample opportunities of testing the value of such tents in dilating the os and cavity of the cervix uteri as an aid to diagnosis and treatment in certain affections of that organ. My experience of these tents has been wholly limited and confined to their employment for effecting this purpose—the cases in which they were used being precisely of that class and character in which sponge tents had heretofore been employed. In each and every case where tried I have been much satisfied with the result.

The laminaria digitata (sea girdles or tangle) is a marine plant well known to visitors to the coast; it is found in great abundance on the rocky shores of the British Islands—indeed, I may say, on almost every rock and reef throughout the world—forming, as it were, a zone or belt extending from low water mark to several feet below it. After a storm, especially towards the close of the season, the beach in the neighbourhood of such rocks is generally thickly strewed with seaweeds, of which the tangle forms a large proportion. The tangle is readily recognised by its cylindrical stem, which varies from two to six feet in length, and which, at its upper extremity, suddenly expands into a flat, ribless, roundish-oblong frond, about a foot or more in breadth, which again is deeply cleft into a number of ribbon-like segments. At the other or lower extremity of the stem is a bunch of fibrous-looking rootlets, firmly adherent to the rocks or stones, especially in deep water. The stem near the base is of variable thickness, sometimes exceeding two inches in diameter. The stem, as already stated, is of a cylindrical form, and gradually tapers upwards, assuming near the apex a somewhat flattened and compressed appearance. It is soft, firm, tenacious, and flexible, becoming hard and horny and greatly reduced in diameter when dry. It is purely cellular in its structure, being devoid of anything like a vascular system. The cells in the central portion of the stem are considerably smaller than those at the periphery. The younger specimens have a fine olive colour, which becomes darker as they get older.

The property which the tangle stem possesses of becoming greatly reduced in bulk when dried, and again expanding when exposed to moisture, is indeed remarkable. Although this remarkable property has long been known, Dr. Sloan, of Ayr, has unquestionably the credit of being the first to suggest the use of tangle as a dilating agent in Surgical practice. A portion of the dried stem will in the course of twenty-four hours or so, by the absorption of moisture, attain to its full original size, that is to say, it will expand to three or four times the diameter it presented when in the dried condition. Experience has fully proved that the secretions of the mucous membrane in and around the cervix uteri afford sufficient moisture for the proper expansion of the tent. Should, however, there be a deficiency of moisture, a small quantity of tepid water may be injected, *per vaginam*, from time to time.

As the result of several experimental trials, I find that tangle in the young and recent condition is on the whole the best for making tents. The young tangle seems to expand more readily and more largely in proportion to its size than that of older material. I believe, however, that the older tangle exerts a more powerful dilating effect, and in cases where this is reckoned advantageous it may be selected in preference. The tents must of course vary, both as regards size and length, to suit the requirements of each individual or special case. Those which I most generally employ vary from an inch and a-half to an inch and three-quarters in length, and are about the thickness of a No. 5 catheter, somewhat abruptly tapering to a point. I have found that if the tents are of a gradually tapering form the dilatation is rather apt to be of a too conical or pyramidal character, being wider below and narrower above. Another objection to tents of this shape is the difficulty sometimes experienced of getting them to remain *in situ*. It is, I think, desirable that as little as possible of the external covering or rind of the tangle-stem be removed or interfered with, as it appears to possess greater power of imbibing or absorbing moisture than the subjacent portion. Whether this be due simply to larger cellular structure or some peculiar stomata of the outer coating of the stem I am not prepared to say. The tents should be introduced on the point of a metallic holder or director, without using the speculum. Each tent should have a piece of tape or string attached to its base, to facilitate its withdrawal. I am in the habit, before using one of these tents, of immersing it in water till it becomes fully expanded, then allowing it to dry, repeating this process several times. This I think improves its expanding properties, and, at the same time, removes the iodide of sodium or other saline ingredients with which it is impregnated. This saline matter sometimes occasions a good deal of smarting and irritation of the mucous membrane with which it is in contact. It is a good plan to dip the tent in hot water for a few seconds immediately before introducing it. I have purposely refrained from oiling the tents before using them, believing that by so doing the absorbing power may be interfered with.

In all cases where it is considered necessary to open up and dilate the os and cervix uteri these tangle tents, I think, will commend themselves to general adoption. In the smaller dilatations, which are the most common and most troublesome, such tents are especially valuable. Being firmer and less bulky than those made of sponge, they can be more easily introduced. Indeed, in those cases where the os and cavity of the cervix uteri is very small they can be introduced when sponge tents cannot. Cases of this kind may occasionally occur in which it may be rendered desirable to combine the use of tangle tents with those of sponge, commencing the dilatation with the former and completing it with the latter. A graduated series of tangle tents may in some instances be required before the requisite amount of dilatation can be obtained. When dilatation to an unusually large extent is rendered necessary, a tent of requisite size may be easily formed or built up of several pieces of tangle, retained together by elastic thread or some such contrivance.

Tangle tents possess so many advantages over those made of gentian or elm bark, that it is here quite unnecessary to specify them. Tangle tents dilate the os and cervix uteri as effectually and as readily as those made of sponge; they possess, moreover, several advantages over those made of the latter material. For example, I have found them to be much more easily introduced within the canal of the cervix uteri. Being firmer, they are not so liable to be broken and destroyed in attempts at introduction, which is often the case with sponge tents; indeed, the same tangle tent might be used over and over again without its dilating properties being in the least degree impaired. To remove any objection on the score of want of cleanliness which such a practice might occasion, the tent may be immersed for a few hours in a weak solution of permanganate of potash before being used again, when it will be found as good as ever. Then, again, tangle tents, as compared with sponge, are much more easily and readily made; this, along with the abundance of the material, leads to another important advantage, viz., greater cheapness. A tangle tent can be easily prepared by any one in the course of a few minutes. On being withdrawn, such tents are in a great measure free from that disagreeable fœtor which is so peculiar to the sponge, as the result of its partial decomposition.

THE BLACK ARMENIAN—CASE OF MELANOPATHIA.

By E. D. DICKSON, M.D.

Ovannes, an Armenian, aged 28 years, native of Gelveh, in the district of Ismid, and a brickmaker by profession, says that he was laid up for the space of two years with a long and serious illness, during which period he was more or less unconscious. He then suffered for a twelvemonth from intermittent fever, assuming at times a tertian, and at other times a quotidian type, and which brought on an enlargement of the spleen. This was followed by an attack of jaundice, which occurred about eighteen months ago, and the yellow colour of the skin then gradually changed into its present swarthy hue. The dark colour commenced at his hands and face, and alarmed him at first, believing it to be an aggravation of his complaint into black jaundice; but he soon became reassured on this score, when he found that, as his skin turned from yellow to bronze his health sensibly improved.

Such was the history of this case of melanopathia when it came under Dr. Fauvel's care at "Koumbar-kané" (the Medical School).

On Tuesday, September 1, 1863, I went to the brick-kiln, at the Sweet Waters of Europe, to see this black Armenian. The entire surface of his skin, excepting the palms of his hands and the soles of his feet, are of a very deep bronze hue, such as marks the colour of the Abyssinian races. He has, moreover, a dusky speck or two on the roof of his palate; and the cicatrised surface of a blister that was applied by Dr. Fauvel over the region of his spleen is of an intense black and shining aspect, exactly such as it would have been on the person of a negro. The mucous surface of the lips, glans penis, and anal orifice, are of a bronze colour, a shade lighter than the skin. He perspires freely. His hair is flaxen, and jet black. His tongue is pale, thick, furred, and fissured. His gums and palate are pale and bloodless. His spleen is enlarged, loose, but free from pain. The edge of the liver feels hard, and its left lobe is enlarged. According to the patient's statement, his appetite is excellent, digestion good, bowels regular, and urine normal.

I found the sounds of the heart very faint; respiration slow; pulse weak, and beating 104 throbs to the minute. A loud venous murmur in the right supra-clavicular space, such as is heard in anæmic females. He is timid, and of a nervous temperament, but he says that he sleeps well, and that he feels himself in perfect health. His employer assured me, however, that he was not a strong man, and could not do the amount of work he ought to be able to accomplish. Ovannes admits that when he placed himself under Dr. Fauvel's treatment he had no appetite, and his spleen was painful; but that he has now a voracious appetite, and could press upon his spleen without feeling pain. He tells me, moreover, that his dark colour has not altered at all, but those who are acquainted with him pretend that he is becoming whiter. I hear that he has a wife and children, and that they are white.

Dr. Fauvel examined his blood, and found the red globules abundant in it; his urine deposited purpurine, and contained an excess of urea.

Constantinople.

Formula in Gastralgia.—M. Delioux has employed the following simple formula with success in gastro-enteralgia following dysentery and in gastralgia with a tendency to constipation:—Calumba root, ʒj; rhubarb root, 15 gr.; boiling water, ʒv. Pour the water on the incised roots over night, and let them infuse until morning. To be drank fasting.—*Bull. de Thérap.*, lxv., p. 73.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

SAMARITAN HOSPITAL.

EIGHT CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)

[From notes by Mr. E. PARSON, House-Surgeon.]

IN our Number for June 6 (page 586 of our last volume) we concluded a report of ten cases of ovariotomy successively performed by Mr. Spencer Wells in the Samaritan Hospital, with the remarkably successful result of only one death to nine recoveries. We now publish eight other cases, being all in which Mr. Wells has performed ovariotomy since the last of those published in our previous report. The total number of cases in which he has performed the operation in this Hospital is now 45, the result being 31 recoveries and 14 deaths; or, a mortality of 31 per cent.

Case 1.—*Ovariotomy—Death Fifty-four Hours after—Fibrinous Clot in the Heart.*

A married woman, 50 years of age, was sent to Mr. Wells by Mr. Ridley, of Shields, and was admitted in May, 1863. She had been married twenty-seven years, and had had eleven children, the youngest being seven years old. The whole abdomen was occupied by a large multilocular ovarian cyst, the girth at the umbilicus being forty-five inches; the distance from sternum to pubes twenty-three inches; and from one anterior superior spine of the ilium to the other, across the front of the abdomen, twenty-nine inches. A wave of ascitic fluid was evident over the surface of the tumour, and the abdominal parietes were œdematous. The catamenia ceased five years before, but recurred eleven months ago, and had since appeared scantily every three weeks. The growth had been rapid, as it had not been noticed until a year ago; but, in six months, tapping had been necessary. Thirteen pints were removed; and, after three months, thirteen pints again at the second tapping. On admission, she said she was rather larger than before the second tapping.

A slight uterine discharge having continued till June 1, Ovariotomy was deferred till the 8th, when Mr. Parson having administered chloroform (Dr. Heine, of Canstadt; Dr. Wahltuch, of Odessa; Dr. Engelhardt, and other visitors being present), Mr. Wells exposed the cyst by an incision six inches long, extending downwards from one inch below the umbilicus. Some ascitic fluid escaped, and extensive parietal adhesions were easily separated. On tapping the cyst, the canula was at once plugged up by the viscid contents. The cyst was accordingly held well forward by hooks, and Mr. Wells made an opening in it large enough to admit his hand, with which he cleared out the tenacious viscid contents. A large piece of omentum which adhered to the outside of the cyst was then separated and the cyst withdrawn. The omentum bleeding freely, it was tied in three portions; the torn portions were cut off close to the ligatures, and the tied ends secured at the upper angle of the wound. The pedicle was secured by a small clamp about three inches from the right side of the uterus, and kept at the lower angle of the wound. The left ovary was healthy. A good deal of ascitic fluid and some blood were sponged from the peritoneal cavity, but no ovarian fluid had escaped into it. The wound was closed by deep and superficial sutures. The fluid and viscid matter removed weighed thirty-six pounds, and the cyst between three and four.

She went on remarkably well during the first twenty-four hours after operation, the pulse ranging between 80 and 90. There was no sickness, and very little pain. But the report on the morning of the second day was that the urine had become very high-coloured the evening before, the pulse had risen to 110, and she had had a very restless night. She had complained of pain under each axilla, but there was no sickness, and the tongue was clean and moist. There was some prolapse of the pedicle and oozing of reddish serum around it, so that Mr. Wells removed the clamp at 10 a.m. During the forenoon the pulse was up to 150, while the respirations were only 24. The abdomen became tympanitic, she complained of pain above the pubes, and the urine was scanty and very high-coloured. The pulse became more rapid and fluttering, the respirations more shallow and gasping, and she died fifty-four hours after operation.

The body was examined twenty-three hours after death. No premature decomposition. Cutaneous aspect of wound accurately united. Omentum adherent at upper angle. Pedicle embraced by lower angle. Not much distension of abdomen. Two to three pints of red serum in the peritoneal cavity, but no clot. On raising the parietes the pedicle sunk inwards, the adhesions around it being very slight. There was an adhesion between the pedicle and the cæcum. The right spermatic vein was large and varicose, and contained a clot, partly fibrinous. The left ovary was small, attached by old adhesions to the mesocolon, and the fimbriæ of the left Fallopian tube adhered to the sigmoid flexure. The uterus was healthy. There was no pelvic peritonitis, but several folds of small intestine were glued together by recent lymph. The liver was large and fatty, the spleen soft. The stomach was distended partly by gas and partly by a quantity of greenish-black fluid. The heart was tilted upwards, its apex towards the left axilla. Its muscular structure was distinctly in a state of fatty degeneration. The right auricle was distended by a soft dark clot. A hard cylindrical fibrinous clot was attached to the wall of the right ventricle, and passed along the pulmonary artery beyond its first division.

In some remarks which he made at the time upon this case, Mr. Wells said, "it appeared that the causes of death in this case might be arranged in the following sequence:—(*a*) In a woman whose heart and liver were fatty we had (*b*) peritonitis over a considerable surface, (*c*) effusion of red serum, (*d*) superfibrination of blood, (*e*) partial paralysis of muscular coat of intestines and stomach, (*f*) consequent distension, and mechanical inteference with action of heart, (*g*) formation of coagula in the ventricle and pulmonary artery, and (*h*) death.

Case 2.—*Ovariotomy—Acute Bronchitis—Recovery.*

A married woman, 44 years of age, was sent to Mr. Wells by Mr. Parkinson, of Wimborne, in May last, with a large multilocular cyst, first noticed as a small movable tumour on the left side three years before. The growth had been slow at first, but much more rapid of late. It was composed of one large cyst above and of a mass of semi-solid matter below. The girth was thirty-five inches; measurement from sternum to pubes twenty-four inches; from ilium to ilium across the front of the abdomen twenty-seven inches. She had been married fifteen years; had never been pregnant, and the catamenia had always been irregular and very scanty. As it was evident that tapping could be of no use, ovariotomy was recommended. It was deferred for some days on account of an attack of influenza, but was performed on June 15. Dr. Grimsdale, of Liverpool, Mr. Parkinson, etc., were present.

The operation only differed from that last described in the absence of ascitic fluid, and the presence of some parietal adhesions; while it was not necessary to tie any omentum. The patient went on remarkably well for about twenty-four hours, she then began to suffer from cough. The pulse rose to 120, and there was free expectoration of viscid mucus. Five grains of carbonate of ammonia were ordered every four hours in a little champagne. During the whole of the next day the pulse was 140 to 136, and the respirations 36, 34, and 32 per minute; the skin scalding hot, but no perspiration. Cough troublesome, but no pain in abdomen. Ammonia continued. On the third day after operation the pulse was 120, respirations 32, cough very troublesome, and expectoration viscid. The acetate was substituted for the carbonate of ammonia, and five minims of ipecacuanha wine were given every two hours. Beef-tea was thrown into the rectum. The ipecacuanha was discontinued at night, as each dose made her sick. The chest was covered by a hot poultice. Stitches removed. Wound healing. On the fourth and fifth days the pulse was 128 and 124, respirations 30 and 28. Free perspiration came on during the fifth day. Clamp removed. After this there was a gradual amendment; she left the Hospital in good health on July 9, and has been heard of since as perfectly well.

It may be observed that Mr. Wells prescribed ammonia freely in this case, because he feared that deposit of fibrinous coagula might take place in the heart, as its action was very rapid and feeble, and the lungs were intensely congested. The object of giving the ammonia was to keep the fibrin in solution, and thus check deposition.

Case 3.—*Large Ovarian Tumour—Ovariotomy—Recovery.*

A married woman, 49 years of age, who had never been pregnant, was sent to Mr. Wells by Mr. Breach, of Aston Upthorpe, with a large and very prominent ovarian cyst. She was admitted on April 28. The catamenia ceased three years before, and she had been very regular all her life. She had not been ill, nor noticed any enlargement of the abdomen, until August, 1862. Some weakness and œdema of right leg had come on latterly. She had never been tapped, but had been treated in the Radcliffe Infirmary, Oxford, during an attack of peritonitis. On putting before her the risk of ovariotomy, she seemed to wish to see what could be gained by tapping, and Mr. Wells accordingly removed twenty-one pints of dark viscid fluid on May 4, 1863. The œdema of the right leg and thigh also pointed to the propriety of a preliminary tapping. On May 12 the note is,—"Œdema of leg quite gone. The collapsed cyst appears to be free, and on the right side. Advised to go home, and return before any great increase in size for ovariotomy." She was re-admitted on June 12, certainly not in so good a state of general health as before the tapping, and with some œdema both of the right leg and of the abdominal walls. Ovariotomy was performed on June 29. Dr. Llewellyn Williams administered chloroform; Professor Courty, of Montpellier, and Dr. Barker, of Bedford, were present. The following is a translation of an account of this operation published by M. Courty in his "Excursion Chirurgicale en Angleterre:"—

"The different steps of the operation having been performed as in the preceding cases, serious difficulties arose on account of adhesion. Many of these attachments to the intestines had to be separated with infinite precautions. The tumour gave way in several places, and had to be removed in fragments, its rupture leading to the escape of a certain quantity of liquid into the abdomen. This liquid, of a brownish-yellow colour, due, without doubt, to fatty matter and cholesterine, might have been taken, on a superficial examination, and with the exception of the odour, for fæcal matter. The clamp was applied as usual. The peritoneum and the pelvic cavity were carefully dried and freed from the effused liquids by the successive introductions of some thirty sponges, used in every direction. The wound was united by four deep sutures above the clamp and one below it, and two superficial sutures. I saw the patient on the 3rd of July. Her state was entirely satisfactory. No bad symptom had arisen, and recovery appeared to be certain."

It is only necessary to add that there was no check to recovery, that she left the Hospital on July 27, and Mr. Breach wrote on August 29 to say that she was "perfectly well—entirely restored to health."

Case 4.—*Ovariotomy—Death from Fibrinous Coagulum in the Heart.*

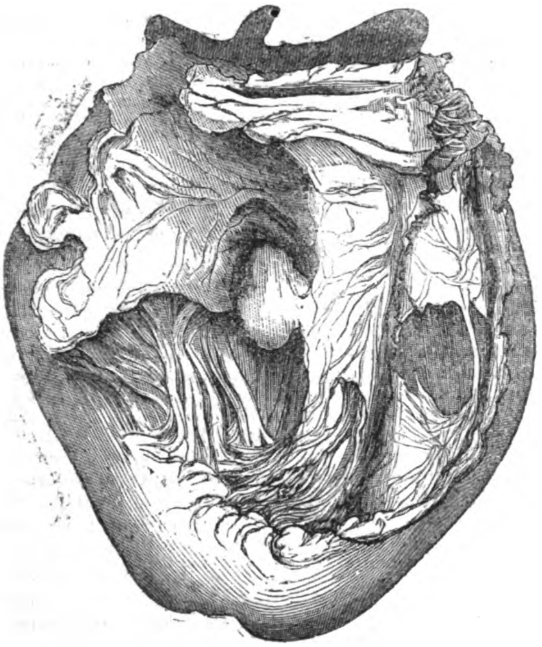
An unmarried domestic servant, 35 years of age, was sent to Mr. Wells by Mr. Davis, of Clevedon, who informed him that she had been tapped in the Radcliffe Infirmary, Oxford, fourteen years before, and had remained for twelve years without any re-formation of fluid; but for the past two years the abdomen had been increasing in size, and it became so large last spring that she was unable to do her work. On May 27, Mr. Davis tapped her, and removed about a gallon of thick fluid. On June 4 he tapped her again, and removed half a gallon more fluid. This relieved tension, but finding that some cysts remained unemptied, he sent her to Mr. Wells as a case in which ovariotomy offered the only hope of cure. She was admitted to Hospital, and on June 22 Mr. Wells made the diagnosis of ovarian tumour free from adhesions, and thought the case a favourable one for ovariotomy; yet as there was no urgent symptom, and some possibility, as she had passed twelve years after the first tapping before the fluid re-formed, that it might form slowly now, she was advised to return to the country, and it was arranged that if she increased in size she should come to town again. She was accordingly re-admitted on July 20, having increased five inches in transverse and four inches in vertical measurement in a month.

Ovariotomy was performed on July 23. Mr. Parson gave chloroform. Mr. Tatum, Dr. Allen, of New York, Dr. Stuckrath, of Berlin, Dr. Molitor, of Carlsruhe, etc., were present. A non-adherent cyst was exposed by an incision four inches long, tapped, twenty-one pints of fluid drawn off, and the emptied cyst gradually withdrawn while Dr. Savage kept the abdominal wall so closely pressed against the cyst that the interior of the peritoneal cavity was not seen, and not a drop of blood or ovarian fluid escaped into it. The right ovary was felt to be healthy, and there was a peduncle about two inches long between the left side of the uterus and the cyst. A broad connection between the left broad ligament and the mesocolon was observed, and the clamp was placed rather on the cyst just where it joined the pedicle than on the pedicle itself. On closing the wound, Mr. Wells observed that the colon was drawn towards it, and anticipating the possibility of having to remove the clamp, he applied a ligature tightly beneath it around the pedicle.

The patient went on perfectly well for twenty-four hours, but thirty hours after operation Mr. Wells found her complaining of pain in the abdomen. There was some tympanitic distension at the epigastrium, and an evident depression of the clamp. He therefore removed it, after cutting away all the dead tissue above it, the ligature previously applied effectually preventing hæmorrhage. She was soon relieved; flatus began to pass *per anum* within an hour, and some fluid fæces passed next morning. She vomited once in the night, looked very well in the morning, and was free from pain; but the pulse, which had before varied from 88 to 104, had now risen to 130, and the tongue was white. The ligature had sunk inwards, and there was a free dark serous discharge from the abdomen. She expressed herself as feeling very comfortable all day long, but at night the pulse was up to 140. She vomited at twelve o'clock, but after some soda-water slept comfortably. She vomited again on the morning of the 26th (the third day after operation), and had a motion of fæcal matter. In the forenoon the pulse was up to 150; the skin very hot, dry in some parts, sweating in others. Flatus passed freely *per anum*. Mr. Wells removed all the sutures, as the wound was well united except at the lower angle, where the ligatures passed out; and he inserted an elastic catheter by the side of the ligatures, through which about six ounces of clear reddish serum, not fetid, were sucked by a syringe. At noon this was tried again, but no more fluid could be obtained. By this time the pulse was up to 160, and the first sound of the heart was almost inaudible. Five grains of carbonate of ammonia were given in champagne every hour. Beef-tea, yolk of egg, and brandy were injected every second hour into the rectum; but the pulse became more feeble and fluttering, the extremities cold, and she died in the evening, about eighty hours after operation.

An examination of the body was made by Dr. Barratt, twenty hours after death, the temperature being about 75° Fahr. Decomposition had set in very rapidly; the intestines were very much inflated, and on removing the strips of plaster (which were blackened by the reduction of the lead to sulphuret), the edges of the incision separated. The lungs were crepitating and fully inflated. The pericardium contained about half-an-ounce of serum. The heart lay quite collapsed at the fundus of the pericardium. On cutting the vessels as long as possible some very fluid black blood flowed from them. The right auricle contained a little black, imperfect coagulum; the right ventricle also contained some of this coagulum, as well as the firm adhering fibrinous coagulum shown in the accompanying woodcut, drawn from the preparation by Mr. Hart. The right ventricle is laid open, and the clot is seen to be grooved, and to pass down from the pulmonary artery, and through the auriculo-ventricular opening, into the right auricle, where it was surrounded by the black imperfect coagulum. The curtains of the tricuspid valve are seen on each side of the clot, so that it will be at once understood (thinking of the ventricle before it was laid open) how the action of the valve was interfered with. The clot adhered very closely to the columnæ carneæ, and to many of the chordæ tendineæ, being as it were twined around the latter.

The left auricle and ventricle were free from clots. Any blood which had been in them was sufficiently fluid to have escaped at the time the vessels were divided. The muscular substance of the right ventricle was very thin and soft. The left relatively thin, weak, and flaccid. The liver was healthy, but pale. The kidneys large, and containing much fluid blood from gravitation. Both stomach and intestines greatly distended with gas. Lymph on the surface of the intestines proved that there had been diffused peritonitis. The uterus was healthy in structure, but there was a thin coating of recent lymph on its fundus. The right ovary was normal. The left ovary was gone, and the left Fallopian tube and broad ligament ended in a dark line where they had been separated from the mesocolon. There was no blood in the peritoneal cavity, only a little serum and some flaky lymph.



This case was watched with great interest, as Mr. Wells suspected the commencement of fibrinous clots in the heart at least twenty-four hours before death, and at least eight hours before death Dr. Richardson defined the precise spot in which the coagulum was found. Very different opinions were held as to the precise share of the clot in causing death, Dr. Barratt regarding it simply as a consequence of the dissolution of the blood, and as even being favoured by the alkaline treatment; while Dr. Richardson looked to the possibility of keeping the fibrin in solution by ammonia, and thus preventing deposit, as the only chance of saving life. Mr. Wells discussed the question very fully near the bed-side, and considered with Dr. Richardson the possibility of passing some instrument downwards from the external jugular and through the subclavian vein into the superior vena cava, by which means the clot might be drawn upwards. But the difficulty of doing this without admitting air seemed to be insuperable. He has expressed his intention of publishing a critical analysis of the most recent researches and experiments bearing upon this very important subject.

(To be continued.)

MIDDLESEX HOSPITAL.

RENAL DISEASE, WITH ABSENCE OF THE PULSE, DEPENDING ON CALCIFICATION OF THE COATS OF THE ARTERIES.

(Under the care of Dr. H. THOMPSON and Dr. MURCHISON.)

The following case is remarkable on account of (1) the complete absence of pulsation in the smaller arteries for some weeks before death; (2) the circumstance that the smaller arteries were extensively diseased, while the aorta and its principal branches were almost healthy; and (3) that the patient was only 30 years of age.

A female, aged 30, was admitted into the Middlesex Hospital under the care of Dr. Thompson, suffering from general dropsy, which had commenced about nine months prior to admission. There was great œdema of the trunk and lower extremities, with puffiness of the face and arms. There were also the ordinary signs of an accumulation of fluid in the peritoneum and pleural cavities. The urine was scanty, dark, and smoky, and contained blood and a large amount of albumen. Its specific gravity was rather low (1015). From the time that the patient first came under observation the radial pulse was noted as very feeble, but up to the end of August it could be counted without difficulty. On September 20, when the patient was under the care of Dr. Murchison, it was ascertained that no pulsation could be felt in any of the arteries of either upper extremity, below the middle of the upper arm, or in the anterior and posterior tibial arteries of either leg. The radial arteries could be felt like hard, rigid cords, having a nodulated or beaded character, and exhibiting considerable tenderness on pressure. There was no lividity or coldness of the extremities. The cardiac impulse and sounds were feeble; the first sound at the base was prolonged and murmurish, but there was nothing like a decided bruit; the cardiac dulness was slightly increased. The condition of the arteries above described continued until the patient's death on October 9. Death was preceded for upwards of a week by great dyspnœa and pain in the cardiac region, with profound prostration.

On post-mortem examination, a large amount of clear fluid was found in the peritoneum and pleural cavities. The kidneys were considerably enlarged, coarsely granular on the surface, and of a pale yellow colour; the renal epithelium was loaded with oily matter. The muscular walls of the left ventricle of the heart were hypertrophied, but the valves were healthy. In the arch of the aorta, about two inches above the aortic valves, there was a patch of atheroma, measuring ten lines by five lines, the lining membrane being here completely destroyed, and the calcareous material bare and exposed. With this exception, the whole of the aorta, the carotids, subclavian, axillary, brachial, iliac, and femoral arteries were quite free from the disease which was so remarkably developed in the smaller arteries. About two inches below the bend of the elbows the radial and ulnar arteries became hard and rigid, and this condition was traced to the minute divisions of the superficialis volæ. On slitting open these rigid vessels, the cavity was found to be nowhere entirely obliterated, but to contain a filiform red coagulum of blood. The arterial coats were brittle and gritty, and the inner surface of the vessels was rough, owing to the calcareous material being at many places bare and exposed. In the lower extremities the tibial arteries were found to be in a similar state, except that the disease was less advanced.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

EPILEPSY FOLLOWING DIPHTHERIA—TREATMENT BY BROMIDE OF POTASSIUM AND FORMIATE OF AMMONIA—RECOVERY.

(Under the care of Dr. RAMSKILL.)

Sarah R., aged 18, single, a nursemaid. Admitted March 31, 1863. Notes taken September 5.

Father, aged 51, subject to rheumatism, but does his work. Mother, aged 42, delicate, but not subject to cough; she has some uterine disease. She has had seven children and two miscarriages. All the seven are living; all well except the patient. Patient is the second in the family. There is no history of phthisis, and, except that her father has rheumatic pains, there is no history of a tendency to gout nor rheumatism. Her cousin (mother's sister's daughter) has had fits from birth to the age of 24; she bites her tongue. Patient's brothers and sisters had no fits in infancy.

She had scarlet fever when 9 years old, but no dropsy or other sequelæ. She has not had measles nor small-pox. She began to menstruate when 14 years of age, and up to the time when she had diphtheria (*vide* infra), but not for six months afterwards. She has since been irregular, and she has missed twice since admission.

She is healthy-looking, has no cardiac disease, and her general vigour is good; has done a good deal of work in the Hospital, and is not hysterical.

No convulsions in infancy. No history of chorea, worms, nor of any evident cause for the fits except as follows:—

Three years ago last March she had an attack of diphtheria. (Medical evidence). She was in bed five months, and for the first three months food came through the nose. At the end of five months she got up, and then could walk, but a day or two after suddenly "lost the use of her limbs." She could not stand nor use the arms. This state of things lasted for a month, and she could then swallow. So far this narrative extends to six months, but she had two fits, one of which was a month after the illness, and the other a month later. After the first six months the fits continued regularly.

She has had two and three a-day, and has never missed a day for a month, and never missed two days.

The Fits.—Both day and night. She says they were less severe at the menstrual period. No warning, but was subject to jerks, as if the whole body jumped. "It would almost throw her out of bed." When the fits were daily, the jerks were continued between them, and would even awaken her in sleep; but when the fits happened at longer intervals these jerks served as a warning, coming on some hours before. It is difficult to describe these jerks. The nurse said that they were momentary; were not attended by loss of consciousness, but the patient said she felt lost, but knew the nurse was present. The whole body seemed to start. The actual fits were severe. She fell, was convulsed on both sides, and turned quickly dark. The convulsion lasted two minutes, and then she was sleepy for an hour or more after. She always bit her tongue, but mostly on the right side. They were, the nurse says, never less violent, but under treatment became less frequent, and at length ceased.

Frequency.—Never missed more than a week. Generally every day. Sometimes one, sometimes four.

The sight is good. She reads No. 1 of Jaëger with each eye. She hears well by watch, but not quite so well on the right side. No paralysis.

Her mind is good, but she is rather slow. Can read and write. She is industrious, good tempered, and never irritable. Sleeps well, except when she has the jerks.

She has no headache now but when she has the fits. She had a pain beginning at the right zygomatic region, and going round to the other side. She is not nervous.

She was admitted March 31. She had the fits about the same for a month, and then gradually less in number, but not in severity. For the last ten weeks she has had no fits at all, and she is quite well in every respect. The last fit was June 4.

Treatment.—March 31.—℞ M. ferri. co., ℥j. ℥iv. Also ℞ Potass. bromid., gr. x; magnes. sulph., ℈ij.; aquæ, ℥j. ter die. Emp. belladona. Pil. hyd. chlor. pulv. op. āā, gr.j.; pulv. ipecac., gr.j., o. n.

May 26.—Rep. c. pot. bic., gr. v.; ℞ Ammoniæ formiatis, gr. vi.; aquæ, ℥ij., ter die.

On July 24 she had some feverish symptoms, for which simple remedies were prescribed. She returned to the other medicines after a few days, and took them until August 17, when a simple tonic was ordered in place of previous remedies.

November 10.—She keeps well up to the present time.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 28.

THE UNWHOLESOMENESS OF DISEASED MEAT.

It must have occurred to any one who read our leader of last week on the proposals of Professor Gamgee to legalise the sale for food of diseased beasts, that before Parliament could be asked to sanction such a proceeding on the one hand, or on the other to prohibit the sale by any more stringent regulations than those now in force, (in either of which directions it might possibly be desirable that legislation should move,) there must be forthcoming an array of facts more definite than any we at present possess as relates to the unwholesomeness of such meat. The subject is one which has not escaped the thoughtful consideration of the Metropolitan Association of Medical Officers of Health. Very shortly, on the formation of their excellent association, a committee was appointed, under the chairmanship of the late Dr. Challice, to investigate this question, and a report was drawn up, embodying what was known at the time both as to the characters by which diseased meat might be distinguished, its effects on the system, and the state of the law with relation to its sale. It was circulated amongst the Health Officers and the newly-appointed inspectors in the various metropolitan parishes by way especially of instruction to those whose duty it became to examine and seize unwholesome food. At a meeting last Saturday, at which this question was again discussed, upon a paper by Mr. Burge, of Fulham, the lack of facts was again the great difficulty that was felt in its determination. We ourselves have asked for facts. Not such hearsay evidence as might proceed from a village gossip, but well authenticated, absolute occurrences, specifying person, place, and time. In order to assist those who are disposed to contribute such facts either to ourselves or the Association, we propose now to state distinctly the sort of information that is wanted, and the points to be specially observed. And we shall do this in the course of a brief *resumé* of our present position and of the precise extent of our actual knowledge on the matter. Mr. Burge, in the paper referred to, took the physiological view—the *à priori* view—discussed the matter deductively, and not, as we hold all such questions should be discussed, inductively. This is not the true or proper use to make of physiology. Such deductions may be true, but they may also be false, from our ignorance of all the conditions necessary to a correct inference. The deductions from physiology to pathology are valuable—most valuable—if regarded as suggestive of a course of inquiry, but no further. Beyond this the proper place for physiology to occupy is as an exponent of the facts brought to light by direct observation; and even then, to use the words of one of the most lucid of modern teachers, Dr. Latham, "it is not *all* physiology which can be made useful . . . but only those parts of physiology which are undeniably true, and not only true, but easily, and at once seen to be so." We will make our remarks under the following sections:—

1. *Measly Pork.*—About this there is no doubt whatever. Direct experiment has settled the connection between the use of this and tapeworm in the human subject. But we require additional facts as to the origin of tapeworm from eating the brains of sheep affected with the coenurus cerebralis (*staggers*). Sheep's brains constitute one of the dainties of the poor.

2. There is a need of facts, again, as regards sheep and oxen suffering from another very common parasite—the *liver fluke* (distoma hepaticum). Does any disease in the human subject arise from the use of the flesh, and especially of the livers, of animals thus affected? This parasite has occasionally been found in the gall ducts of the human subject. Instances of the occurrence will be found narrated in Dr. Budd's work on the liver. We should like to know whether there is any connection between its occurrence and the use of the flesh or livers of "rotten" animals. In sheep and oxen the fluke is derived from the pastures on which they have been fed, where the animal exists in a different stage of metamorphosis.

3. There are two conditions short of actual disease in which the flesh has been said to become unwholesome; in both there is excitement of the circulation and deep disturbance of the nervous system—the condition resulting from *overdriving* of animals, and that which occurs in *protracted and difficult labour*. The former is said to occasion dysentery in man when the flesh is eaten. What facts are there to prove this? The flesh of a hare that has been coursed has not the same evil reputation. The latter condition is said to result in the production of an animal poison, and some cases by Dr. Rehfeldt

are narrated by Professor Gamgee in support of the view that this poison produces symptoms that have been mistaken for those of cholera. Is such flesh poisonous if there is present no actual febrile disease? Is it poisonous if a true metritis or puerperal fever have been established? There must be plenty of cows slaughtered as the only means of delivery from their pain. We should like to know what becomes of the meat, and what comes of its use by man. There is no doubt of the poisoning in Rehfeldt's cases, but it does not clearly appear how far there was actual disease established in the cow. The case, as narrated, leaves this in doubt.

4. The flesh of animals dying or slaughtered while suffering from *milzbrand*, *quarter evil*, or *malignant anthrax*, a disease which passes under various other aliases, is said to be poisonous, and to have produced disease in man when eaten. Handling the flesh does undoubtedly induce malignant pustule or gangrenous erysipelas,—this may at once be conceded as settled. But what of eating the meat? Plenty of cases of alleged poisoning and production of this disease are recorded in the foreign journals. It is on the Continent that this malady is most prevalent; but it also occurs in this country. Professor Gamgee, who subscribes to the doctrine that the disease is communicable to man in this way, cites no cases of his own in proof of it, but merely says that such instances have been reported to him—two by gentlemen in Aberdeen, and one by a dairyman—but even here it is not specified what disease was produced. In observing such cases, should they occur again, it would be well to note the season of the year, the condition of the atmosphere, and whether the persons attacked had handled the meat at all before it was cooked, or were in a position to have acquired it by any more direct form of contagion. It would be well, too, to note any ill effects clearly traceable to the use of the flesh of animals dying or slaughtered when suffering from splenic apoplexy. In the sheep the carbuncular disease is known as *braxy*, and in the Scottish hills braxy hams, as well as hams made from sheep who have died from any other cause, have been from time immemorial the food of poor shepherds all the year round. Such meat, often green, tainted, or even putrid before being cured, is sold, when cured, at a good price to those who fancy such things as mutton hams. In Scotland these hams are apparently eaten with impunity.

5. Is the flesh of animals dying or slaughtered when suffering from *typhus* productive of disease in man? and, if so, of what form of disease? In reference to this question we may quote from Dr. Greenhow's "Report on Murrain in Horned Cattle," addressed to the General Board of Health in 1856. He says:—

> "Large numbers of oxen and cows suffering from a typhous epidemic followed the allied army to Paris in 1814. The entire population of Paris and the suburbs, including the troops which surrounded and occupied the capital, fed upon the meat of the diseased animals for two months without any increased amount of sickness, or the production of any epidemic disease. None even of the animals that died were lost. M. Coze, sen., who made extensive and precise observations upon the effects of meat derived from diseased cattle, relates that a thousand large oxen suffering from typhus were consumed by the allied and French armies and by the inhabitants near Strasburg in 1815. Many of the animals were slaughtered when actually at the point of death, and their flesh consumed for food. Yet this food produced no disease, and did not even disorder the digestive organs of those who used it."

Now, we do not make this quotation in proof of the wholesomeness of such meat, for the fact as narrated is open to criticism, but to show what sort of evidence those who assert the unwholesomeness of such meat have to overcome. Taking our natural standing-place as empirics, we are in doubt, and ask for facts, and among them for a correct diagnosis of the disease in the beast.

6. In this country, and at the present time, pleuro-pneumonia—the *epizootic lung disease*—is that which creates the largest supply of diseased beef to the markets, and it is this disease, therefore, which we are the most anxious now to get definite information about, as respects the wholesomeness of the meat. Is it ever unwholesome? Does it produce disease in man, and, if so, disease of what kind? At what stage is it unwholesome? in all stages, or only in the latter stage shortly before death? We positively know nothing about all this. It is true Dr. Livingstone relates that in South Africa the use of such meat has the reputation of inducing boils and carbuncles, and we know that these diseases have prevailed to an extraordinary extent in this country during the last fifteen or twenty years,—during the same period, in fact, that the epizootic lung disease has prevailed here. Professor Gamgee has related an instance in which a connection of this kind was observed in a large establishment in the North of England (a). If this connection can be fairly established by a sufficient number of fair instances (and should it exist there ought to be no difficulty in collecting them), it will be a matter of importance, inasmuch as it will constitute at least one definite truth as respects the sort of diseased meat which is most common in our shops as we write. But as yet we cannot hold that it is established.

We might proceed in like manner to point out the deficiencies of our knowledge in respect to other diseases which require also to be inquired into, quoad the meat, but prefer pointing ont now some other questions which are involved in any investigation undertaken to solve our difficulty.

8. And one of these questions relates to *tainting* of meat. It is commonly held that tainted meat is unwholesome; no doubt many people eat it with comparative if not total impunity; the gastric secretions poured out during digestion are well known to possess antiseptic properties; possibly it may only be those whose digestion is weak that suffer from such food. In the cholera time it was believed that cholera sometimes followed the use of tainted meat, and it is said that the landlord of an inn at Henley-on-Thames got an attack and died from this cause. Or is it the case that in the instance where tainted meat induces gastro-intestinal disorder or typhous symptoms (if the latter ever do result from its use) the putridity is specific in its character? Diseased meat becomes tainted sooner than the meat from healthy animals. This is certain; a century ago the fact as respects pleuro-pneumonic beef was pointed out by Dr. Brocklesby; but what we want to know is whether this early putrescence differs in any degree in the nature of the change undergone from the later decomposition of healthy meat. We think there are facts which point to an answer in the affirmative, but this we ought to know. In any investigations it should be noted how soon after killing the meat was consumed, and what was the odour and appearance of the flesh before being cooked.

9. The presence or absence of *fat* in the diseased meat should also be noted. Moderately fat meat, or rather, meat where there is a proper proportion of fat among the muscular bundles is that most readily digested. It would be well to distinguish disturbance of the digestive system from the use of meat totally free from fat, from disturbance fairly and properly due to the presence of a poisonous matter in the meat itself; and again, it is known that fat, kept in a close, damp place till it becomes "muddled," as well as cooked meat similarly kept, acquires such poisonous qualities that the operation on the system has often been undistinguishable from that of a narcotico-irritant poison. Does a similar change result earlier in the meat of a diseased beast, and is this the explanation of the disturbance of the digestive

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(a) "The gentlemen appointed to investigate the spread of pleuro-pneumonia in Victoria could only discover one instance of diseased meat producing sickness, although cases are not uncommon: but from the symptoms ceasing on discontinuing the meat, they very seldom come under the notice of Medical men."—*Medical Record of Australia*. Edited by Dr. Reeves. Melbourne. July, 1863. P. 83.

system which has been said to arise from tainted meat? This is a suggestion which, it appears to us, it would be worth while to work out; it might possibly furnish a clue to the numerous discrepancies in the evidence which relates to the wholesomeness of diseased meat. But yet we are tolerably satisfied that the meat from beasts overfatted or hastily fatted, where the oily matter is deposited without a due proportion of filamentous tissue, is, *ipso facto*, purgative to some people; and the same seems to be the case with flesh or kidneys which have presented the appearance of fatty degeneration, fat taking the place of the natural structures more or less completely.

10. Lastly, there is the question of *cooking*. Allowing that any of the kinds of meat we have referred to contain a poisonous principle, is not that poisonous principle destroyed by such a heat as the meat is exposed to in cooking? M. Rénault, who, some few years ago, made a number of experiments on animal poisons after exposure of them to heat, replies in the affirmative. But then, on the other hand, the food of man is always, or almost always, cooked before being consumed. Where disease, then, results from the use of diseased meat, the efficiency of the cooking ought to be inquired into. Red meat is virtually uncooked. Red gravy owes its colour to uncoagulated blood: the colour is destroyed if the meat be raised to the temperature of 150° to 158° (see Liebig "On Chemistry of Food," p. 127), yet how often is meat eaten and preferred in this less perfect stage of cooking! It may turn out that no meat, however diseased, will communicate a poison to man if thoroughly cooked. As regards measled pork this seems to be true (see Fleming "On Measle in the Pig"). Is it so with other diseases? A strange case is related by Verhayen upon this point, which we think will show the difficulty of the question. It happened in Bavaria. A cow with carbunculous fever was slaughtered, and the meat boiled. Several people partook of it, and all without inconvenience; but a woman, who was subject to abdominal cramps, only took some of the broth. And the woman was the only person that suffered. She was seized with violent vomiting and acute abdominal pains, and we are told that a swelling such as characterises the malady appeared upon the chest; syncope, cold sweats, and meteorism followed, and she died. Now, this is very unsatisfactory, but it is a fair sample of the sort of information we have upon these subjects.

And now we shall stop. It must not be supposed from anything we have said that we are arguing in favour of the wholesomeness of diseased meat. Our instincts abhor its use; but feeling and imagination must have no place in a purely scientific inquiry. Again we ask for precise, definite facts, and we do protest against the importation into the inquiry of anything that cannot be fairly proved by an appeal to experience. The questions to be solved are, as we have shown, enveloped in difficulties, but the difficulties are no greater than those which surround every other etiological investigation.

THE CHANGES IN THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

In the abstract of the *London Gazette* of November 20, published in the *Times* of the 21st, appeared the following announcement:—

> "Her Majesty has appointed Mr. Edmund Alexander Parkes, Doctor of Medicine, Professor in the Army Medical School, Netley; Mr. Richard Quain, Doctor of Medicine, of Harley-street, London; and Mr. Henry Wildbore Rumsey, Surgeon, of Cheltenham, to be Members of the General Council of Medical Education and Registration of the United Kingdom for England, in the place of Sir Charles Hastings, Knight, Doctor of Medicine; Mr. William Lawrence, Surgeon; and Mr. Thomas Pridgin Teale, Surgeon."

After the first feeling of surprise elicited by so sweeping a change has subsided, the question will naturally be asked,—What is to be the effect of the alteration on the Council itself, and, through it, on the Profession? Without expressing the slightest disrespect to any one of the gentlemen thus deprived of office, it may be unhesitatingly answered that the effect must be good. In the first place, the influence of the College of Surgeons in the Council, which has hitherto been exerted purely and unscrupulously in its own interests, will be materially shaken. This alone is a great benefit. The Medical Council, if anything, is a representative assembly consisting of members elected by the Medical Colleges and Corporations, together with a supplementary number chosen by and representing the Government of the country. If any of the latter prove by their votes on all occasions that their real allegiance and support are given, not to the advantage of the public, but to that of one particular College or Corporation already amply represented in the Council, the choice of Government becomes really subversive of the representative character of the Council, and opposed to the interests, not only of the public, but of the Profession. Hitherto, the College of Surgeons of England has been able to command a majority, or at least such a number of votes as to enable them to set at naught the recommendations and authority of the Council. The retirement of Mr. Lawrence terminates this evil. Another effect will be to establish the precedent that the appointments made by Government are neither exclusive nor necessarily permanent. They must henceforth be open, as all State honours in connexion with such a profession as Medicine should be, to merit, wherever found. If we are rightly informed, this is one of the chief reasons on which the alteration has been made. Without comparing the claims of the retiring with those of the newly-elected members, it is but fair to say that the latter appear to have been chosen in no narrow or party spirit, but on general grounds.

The first two are Physicians who well represent the interests of scientific Medicine. In some respects their position in the Profession renders them peculiarly fitted for the office. They are both in the prime of life, and have already acquired a high reputation in Professional circles. Dr. Parkes, by his connexion with the public service, is specially fitted to represent the claims and feelings of the Medical officers of his own and the Naval Medical Department. Dr. Quain, already on the council of two great Medical educational bodies, has had a fair insight into the working of our educational systems, whilst the Medico-political views of both are believed to be eclectic and essentially liberal. The third gentleman on the list is well known as a writer and advocate of a system of "State Medicine." His work on the subject is a most elaborate and thoughtful essay. It treats of a wide series of questions; amongst them are the propriety and limits of State investigation and interference in matters relating to the health of the people, the extension of sanitary inquiry, the investigation of epidemics, the Medical care of the poor, local sanitary administration, the various departments of Medical police, such as registration of births and deaths, Medical evidence in law courts, the adulteration of food and medicines, vaccination, etc. It sets out by advocating the principle that "the real public want is a Board or Council representing the administrative skill and ability of a great nation, aided by its Physicians, and enlightened by its philosophers; a body invested with sufficient power to regulate, amend, and perfect the willing efforts to be made in every locality by judiciously constituted district authorities, and by a trained and scientific corps of officers." We have said enough to show that in choosing Mr. Rumsey, Government have evidently been influenced by the fact, that amongst provincial Practitioners few have paid more earnest attention to those public questions which bear directly on Medicine. We are bound, however, to add that many of the suggestions made by Mr. Rumsey and others who advocate considerable State interference in the Medical management of the community, admirable as they may be in theory, can never possibly be carried into practice. We doubt whether the idea represented by the term "State Medicine" is likely to acquire a greater influence in the present day. Government, it must be acknowledged, has given the Council the power of publicly registering all who are properly qualified to take charge of the corporeal interests of the public; but having done this, it leaves people to make their own choice. This course we believe to be the only one in accordance with the free institutions of the country. State Medicine is very good in theory, but English people are the worst in the world to be treated in any sense on theory, partly because they seldom act on purely theoretical grounds themselves, and partly because, although essentially a practical people, they are sufficiently acute, and sufficiently combative, and sufficiently free never to miss an opportunity of meeting the *doctrinaire* on his own grounds, and of opposing him with his own weapons. Never has a theory of government of any kind been started in this country without a hundred speculative objections being urged on all sides against it, and amidst a cloud of opposition the original theory generally resolves itself into thin air. However, we hope that in office Mr. Rumsey will prove that the considerable attention he is known to have given to the subject of the relations of Medicine to the people at large has fitted him the more competently to legislate on the relations of the different portions of the body medical to each other.

In their retirement, Sir Charles Hastings, Mr. Lawrence, and Mr. Teale will take with them the recollection of having enjoyed one of the highest Medical honours which the State has to bestow. It would be ungracious now to single out the conduct of any one of these gentlemen whilst in office for criticism. We believe that Sir Charles Hastings and Mr. Teale have enjoyed, and have never abused, the confidence placed in them by the great mass of provincial Practitioners, and the retirement of the former will doubtless be regarded with regret by the Association, with whom his name must ever be connected. We may be glad to see younger men—men who, we think, better represent the present of the Profession—in office; but the past has always its claims on our respect, and we hope that the three gentlemen who lately represented the Queen's Majesty in the Council will long enjoy the honour which undoubtedly appertains to having been chosen for that position in the first authoritative Medical Assembly that ever met in Great Britain.

THE WEEK.

ARMY MEDICAL DEPARTMENT.

By the last number of the *Army and Navy Gazette* we perceive that the dearth of candidates has forced itself upon the notice of the authorities. We are told that a competent judge has expressed himself to the effect, that, unless some changes take place, we are threatened with a famine in the Army Medical element As it has been conceded that something must be done to overcome the present discontent, we are quite willing to pass by the remarks upon the process by which this has been accomplished. It may be (for it is right that it should) that the terms *properly qualified* Medical men have occupied a prominent position; it may be that the discontent is due to our "self-assertion" as a Profession, and it is certain that the Surgeon and Surgery of the present day differ entirely from the time of Agincourt and Creçy, when, we are told, the Medical officer plunged the stump, if he could make one, in hot oil. These kind of remarks, and this form of contrast is very agreeable to many people, because, while it expresses the truth, it conveys at the same time a sort of reproach and indignity. We presume that the readers of the above journal are as little solicitous of confiding their stumps to the barbarous Surgery of a past age, as they are of committing their limbs to the tender mercies of ignorant and incompetent Professors of the art in the present. It is perfectly true that the education of a Medical man, and its cost in the present day, have wonderfully increased, and, as a consequence, men look for a commensurate advance in pay and position. We should be very glad to have it in our power to announce here that some changes had taken place, and that the public services held out such prospects to our more intelligent and energetic students as to warrant us in urging them to respond to the notice in our advertising columns, that the next competitive examination will be held in February next. That we shall, sooner or later, be enabled to do this, however, we have no doubt.

SCARLET FEVER AT SCHOOLS.

The Rev. Dr. Holden, the Head Master of Queen Elizabeth's Grammar School at Ipswich, who has the repute of being a great scholar and an excellent master; his cousin, Mr. Luther Holden, the Assistant-Surgeon to St. Bartholomew's Hospital, and one of the best anatomists of the day; and Dr. J. H. Bartlet, of Ipswich, a Doctor of Medicine of London, and possessing qualifications sufficient for a wider sphere than East Anglia, have just been caught out in a very naughty trick. It is impossible to have more tractable culprits, for they confess to the letter the main fact alleged against them. They sent a schoolboy ill with scarlet fever from the school at Ipswich in a public railway carriage to Yarmouth. We need scarcely say that no damage was done to the boy himself. We may be sure that neither Dr. Bartlet nor Mr. Holden would have allowed him to travel if there had been any risk to him. Unluckily the boy, instead of going to a bachelor uncle's at Yarmouth, was sent on in a fly to his father's at Acle, where he was quite unexpected, and where no time was given for precaution against giving the infection to the other children. This was a mishap which a little care would easily have prevented, and which drew from the boy's father an angry letter to the *Times*, and we may say in parenthesis that the Rev. Doctor's reply on this point is not in very good taste. However, we may dismiss these incidental circumstances, and call attention to the one point only, viz., that, to save the other scholars, the Rev. Dr. Holden and his Medical advisers sent away a boy ill with scarlet fever to travel in a railway carriage and fly, and so to do his best to spread what is always a disagreeable, and too often a fatal disease. The real excuse is that these gentlemen only did what is done every day, that they are no worse than their neighbours, but unluckily they have been found out and shown up in the *Times*. For the sake of the public we are heartily glad of it, and whilst dismissing the present culprits, we hope that they and ten thousand others who are guilty without being found out will just set to work like men of common sense and try to supply a great public want. Scarlet fever and the allied diseases will spread in crowded schools and houses under present circumstances. The only thing that can prevent it is to weed out the patients as soon as they show the least sign, and keep them by themselves till all risk is over. Every large school should have a detached sanitarium. Many of the old foundations had them, as Winchester and Westminster, and it is said that some even had a house of recovery in the country for the scholars, although by this time Deans and Chapters have probably *taken care of them*, as Mrs. Squeers used to say when she took the boys' pocket-money. The want of such a place at the Royal Medical Benevolent College has been pointed out ere now in these columns. Such a building ought to be at the present day considered as essential as the school-room. But besides this, every town should have accommodation for patients of all ranks labouring under infectious diseases. During the last summer what a comfort the Small-pox Hospital and the Small-pox Wards opened in the better parishes, were to London householders! Besides this, there should be a carriage, lined with American leather cloth, such as is used in the West-end London parishes, for the conveyance of the patients. At present, panic and cowardice, shabby shifts and concealment mark our dealings with scarlet fever. People hide it, and deny it, and say "it's only a rash," and send their sick indiscriminately away, and so scatter the disease broadcast. All are bad alike. The nobleman sends out his sick servant in a street cab to a Hospital, or workhouse, or lodging, and the schoolmaster his scholar. Look upon fever as a public evil, to be met by provision of proper accommodation for the sick by public combination, and we should be less often scared by tales of whole families cut off by scarlet fever.

POST-MORTEM EXAMINATIONS IN PUBLIC HOSPITALS.

A VERY unseemly dispute lately occurred between Mr. H. Raffles Walthew, the Deputy-Coroner for Middlesex, and Mr. Herbert Spencer, the House-Surgeon to the London Hospital, on the subject of the propriety of a post-mortem examination which had been made at that institution in the case of a child who had died from the effect of a severe burn. It is the custom in several, if not all, the great London Hospitals to institute post-mortem examinations in the case of all persons dying within their walls unless under very exceptional circumstances. Such a practice must have the approbation of all who have at heart the progress of scientific medicine, and it is a question whether the ignorant prejudices of the relatives of the deceased should be permitted to bar a method of investigation which has already borne ample fruit to the public weal. Provided the examinations be conducted with the same decency and respect for the remains of the deceased that are observed in the case of the wealthy and high-born, we think that the boon they offer to science and the community ought not to be lost through a mere maudlin sympathy with the unreasoning sensibilities of survivors. This opinion, however, is not shared by the Deputy-Coroner for Middlesex.

> "The father attended the inquest in a state of great excitement, and became very violent in the court. He complained of the House-Surgeon, who had opened the body of his child when it had died from burns, and without his sanction. He then rushed about the inquest-room shouting, and demanded an explanation.
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> "The Deputy-Coroner said that such a practice was highly improper, and it was quite unnecessary to make post-mortem examinations of the bodies of persons who died from burns. He would send for the House-Surgeon, and requested the father to be quiet, or he would be removed from the court. The inquiry then proceeded, but the father several times raved in a state of madness about the inquest-room, when a police-constable was called, but the father pushed the constable backwards. He also attacked Mr. John Pownceby, the summoning officer, when the whole of the jury rose from their seats to assist the two constables, and with much difficulty the father was forcibly removed from the court. He afterwards became more furious, and made several attempts to enter the inquest-room, but the jury barricaded the room, and kept him out until further aid arrived from the police, when the father was removed from the Hospital.
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> "The Deputy-Coroner said that great allowance ought to be made, for the feelings of the father had been outraged by the manner in which the body of the deceased had been treated without authority."

Mr. Walthew was evidently entirely ignorant of the great scientific interest attaching to the condition of the internal organs in cases of death from severe burns. At the present time the connexion between internal lesions and the destruction of surface in burns has assumed high importance, in consequence of the researches of Brown-Séquard, who, it may be recollected, has come to the conclusion "that it is in a great measure by a reflex action of the spinal cord that burns produce their deadly influence on the viscera." The experiments on which Brown-Séquard bases this conclusion were made by dividing the spinal cord at the level of the third or fourth lumbar vertebra, so that the posterior limbs could not give pain, and no irritation could be propagated from them to the viscera of the head, chest, and abdomen, then by scalding the posterior limbs with boiling water, and finally by killing the animal after two or three days. In these cases he found no congestion of the internal organs, except of the bladder and rectum. On the contrary, when section of the spinal cord was made at the third dorsal vertebra, and the same process repeated, great congestion with ecchymoses and serous effusions in the abdominal viscera resulted. We only quote these experiments and researches to show that post-mortem examinations of persons dying from burns are not so unnecessary as Mr. Walthew supposes, but that the appearances found are closely connected with, and may if carefully observed and recorded throw light on, some of the most important and most profound questions in pathology and physiology. The hysterical ravings of the father, however, seem to have had the effect of completely enlisting his sympathy and influencing his judgment. We cannot, on the other hand, give entire approval to the conduct of Mr. Spencer. If the account we have seen be a correct one, that gentleman, on being asked by the Deputy-Coroner why he had opened the body, instead of entering on any explanation, told the Deputy-Coroner that it was "not a question for his interference, and that he had made the examination on the authority of the institution." On the Coroner observing that the practice was highly improper, the rejoinder was "that he had no right to make such an observation." The result of the altercation was that the Deputy-Coroner threatened to commit Mr. Spencer, and finally ordered him out of court, whilst the latter expressed his intention of writing to the Secretary of State. The jury tacked to their verdict an expression of their opinion as to the impropriety of making unnecessary post-mortem examinations without authority.

Now, it seems to us that this most disgraceful scene might have been entirely prevented had the House-Surgeon of the London Hospital displayed more *savoir faire* and courtesy. It is clear that he forgot the respect due to the Deputy-Coroner whilst discharging his duties. Instead of bearding that official, had he explained to him and the jury the scientific importance of the case, and that in burns the internal lesions are frequently the cause of death, he would have shown a better appreciation of his own position as a representative of the Profession in a legally-constituted court.

HARD STUDY.

DR. ELLIS, in his inaugural address to the students of the Catholic University, Dublin, says :—

> "Be not afraid of injuring your health or shortening your lives by hard study. I have had many opportunities of observing the causes of death in persons of studious habits, and I never could fairly attribute the death of a single person to excessive study. In order to satisfy your minds on these points, I have procured a list containing the names of the most studious men who lived during the last two centuries, together with the ages at which they died :—Sir Isaac Newton died at the age of 85 years; Dr. Heberden, 90; Dr. William Harvey, 79; Galileo, 78; Sir John Pringle, M.D., 75; Sir Thomas Brown, M.D., 76; Copernicus, 70; Dr. Edward Jenner, 74; the Most Rev. Dr. Whately, 77; Daniel O'Connell, 75; Lord Lyndhurst, 91. There are many public men still living and capable of discharging the duties of their respective offices with something like the vigour of youth, although they are very far advanced in years. For instance, the First Lord of the Treasury, Lord Palmerston, is now in his 80th year, yet he is capable of taking an active part in the affairs of the nation, and of sitting up of a winter's night answering questions which must be occasionally very disagreeable. Lord Brougham is in his 95th year, and yet he is at the head of the savans, delighting his auditors with his learning and his eloquence. There is a judge at present sitting in the Queen's Bench in this city 87 years old, with a vigorous intellect, and his friends say that he has made up his mind neither to die nor retire so long as the present government remain in office!"

Dr. Ellis might have added the caution that it is not brain work *per se* which kills, but brain work pursued to the neglect of bodily exercise and recreation, or brain work attended with what the Rev. Professor Haughton justly calls that undefined and terrible disease, *anxiety of mind*.

FROM ABROAD—POSITION OF LEGAL MEDICINE IN ENGLAND—DANGER OF CAUTERISING THE CAVITY OF THE UTERUS—AN UNEXPECTED LEGACY—HORSE AND COW-POCK.

On the 16th inst. the Paris Faculty of Medicine was re-opened. The disturbances which took place last year during the address of M. Rayer, the Dean, whose appointment was so distasteful to the students, was sought to be obviated this year by the omission of an address on the part of this functionary, and by the provision of means for repressing any disturbance of the proceedings that might arise. These precautions were, however, unnecessary, for the students had come to the resolution of absenting themselves from the introductory ceremony *en masse;* so that it was delivered, as far as they were concerned, to empty benches. There was, however, a large concourse of the Professors, and of Medical and literary celebrities. The orator of the day was M. Tardieu, who chose for his subject the eulogium of Adelon, the Medical legist, taking the occasion for exhibiting the duties, claims, and services of public or political Medicine. The discourse was one of great merit, but its length and somewhat diffuse character prevent our offering any analysis. One passage, however, we may cite, as exhibiting the orator's opinion of the condition of legal Medicine in our own country:—

"The constitution of legal Medicine as a science is not separable from the progress of Medicine in general. It possesses in itself neither a fundamental doctrine nor a dogmatic aim; and it will always remain subordinated to the more or less enlarged and intelligent employment of its lights made by jurisprudence. It is for this reason, we may say, that judicial Medicine really only dates with us since the reformation of our codes. Its titles of nobility do not lie in the antiquity of its origin, but on the utility and importance of its services.

"So true is this, that the very existence of legal Medicine depends entirely, and in all countries, on the state of the legislation, and in proportion to some extent to the degree of perfection of this. In England legal Medicine does not exist, or, to speak more correctly, only does so by chance. Justice never requires a report from the Physician in the sense familiar to us. When a criminal case, constituting a personal offence, is taken before a jury, the counsel of the prosecutor or of the accused, just as his deposition is supposed to be favourable to the one or the other, summons as a witness the Practitioner conversant with the fact. It is not the judicial authority which collects the testimony and seeks for the proofs. Accuser and accused, each institutes his inquiry and brings forward his witnesses. If the Practitioner who has attended the victim, or can prove a violent death, believes that a crime has been perpetrated, he is cited by the prosecution; while, if his opinion lies the other way, it is the accused who produces him. The advocates on either side successively interrogate him. He can only say what he has seen, and is scarcely allowed to exhibit the inductions which he has drawn; and if he venture to cite, in support of his view, a consideration or a fact not the result of his direct and immediate observation, the judge stops him, or the advocate whose client he is damaging protests against his statements being received. You thus see, gentlemen, that subordinated to the general principles which regulate the system of testimony in English legislation, the part of the Medical Practitioner is reduced to that of a simple witness, whose deposition is even often interfered with, he not being free to pronounce his entire opinion. Am I not, under these circumstances, in spite of the warm protests of the Medical Profession in England on the occasion of a recent important trial against the derogatory part it is made to play, and in spite of the efforts and works of some distinguished *savants*, as Male, Christison, and Taylor, am I not justified in declaring that legal Medicine does not exist in England. And is it not true here, as in so many other things, that while we are engaged in searching for models among them, our neighbours warmly desire some reforms of French importation."

Although the Medical witness is not quite in the unsatisfactory position represented by M. Tardieu, no one can deny that in France the co-operation of the Profession with the Tribunals is secured in a much more satisfactory and effectual manner than with us. M. Dechambre, in the *Gazette Hebdomadaire*, indicates to M. Tardieu our "Medical Witnesses Act" as securing the presence of *experts* before the coroner's court; but all familiar with the subject are aware how unsatisfactory is the working of this act, which is rather a means of providing the payment of the witnesses who are called than of securing that the most efficient should be selected.

M. Nonat, in a communication to the Academy of Science, expresses his great surprise at the statement made in a recent paper by M. Courty, that he had applied the actual cautery and solid nitrate of silver to the cavity of the uterus and its cervix hundreds of times without ever meeting with any accident, whether primary or secondary. Whatever may be the case at Montpellier, this is not so at Paris, and M. Nonat is enabled, both from his own practice and that of numerous distinguished Surgeons, to state that such cauterisation is attended with extreme danger, so that it should only be had recourse to with the greatest circumspection. Stricture or even obliteration of the uterine passage may follow it, but a still more frequent and redoubtable accident is the production of subacute metro-peritonitis, or peri-uterine phlegmasia, leading to suppuration and death. M. Courty considers the only contra-indication of his procedure is the presence of an inflammatory condition of the uterus; but a far more important one really is the peri-uterine phlegmasia which so often co-exists with diseases of the uterus. A long experience has taught M. Nonat the necessity of the greatest care and distrust in this matter, and has induced him to protest against these optimist conclusions of M. Courty, which are calculated to inspire those disposed to imitate him with a dangerous security.

In an article discussing that interminable subject, the arrangement of fees, the editor of the *Boston Journal*, after remarking upon the rarity with which we hear of legacies or liberal gifts from grateful patients, relates the following curious instance:—Dr. —— was called to the wife of a neighbouring physician while in difficult labour, and having delivered her by the forceps, left the house in twenty minutes. There was no occasion to pay a second visit, and of course no charge was made. At the end of forty years, the case having well nigh passed from his remembrance, the doctor received intimation that the lady whom he had so relieved had left him a splendid legacy. This consisted of 10,000 dollars in personal property, and another 10,000 dollars share in a valuable estate, likely to rise much in value, making of the whole a bequest of about 20,000 or 30,000 dollars. The recipient had never seen the testatrix from the time when he had delivered her, forty years before.

M. Depaul startled the Academy of Medicine the other day with one of those paradoxical assertions which always arouse attention, viz., that the *vaccine virus has no existence.* The occasion was as follows:—Some five months since, M. Bouley communicated to the Academy a case of vaccinal inoculation which he termed "revolutionary." He had produced magnificent cow-pock on the udder of a cow by inoculating this with the matter of aphthous stomatitis of the horse, and the virus derived from this udder was employed in the successful vaccination of several children. M. Depaul now announced his intention of discussing the interpretation of this fact, stimulating attention by the abovementioned declaration; but as so long a period having elapsed since he related it, M. Bouley preferred first to state to the Academy the results of the investigations which he had been led to make concerning, and the reflections which these gave rise to. He believes, then, that *the grease* of the horse, observed by Jenner, and other affections of this animal described by Sacco, Hertwig, and other observers as capable of giving rise to cow-pock when translated to the cow, as well as this aphthous affection recently prevailing at Alfort, are only examples of different manifestations of one and the same affection which he denominates *horse-pock*. Indeed, a more recent outbreak of the affection at Alfort has exhibited the buccal eruption, accompanied by a well-marked cutaneous eruption, capable of inducing cow-pock in the cow. Examining these cases at Alfort, M. Depaul came to a somewhat different conclusion to M. Bouley regarding the affection, not as a vesicular but as a truly pustular affection, having its three periods of incubation, eruption, and desiccation. It has a determined tendency to generalise itself, and its course is identical with that of variola or vaccinia of man inoculated from animals. M. Depaul enters into a description of the appearance and course of the eruption at some length; and other analogous facts observed since the occurrence of these cases at Alfort are confirmatory of his views. One of these was the case of a student at Alfort, who, having accidentally inoculated himself with the product of the equine eruption, exhibited on the hands and forehead well-marked variola. Another case was not less significant. A cow having been inoculated with the liquid from the pustules of a horse exhibited fine cow-pock, and some days afterwards, nineteen other cows, shut up in the same stable, manifested a similar eruption without having been inoculated. Moreover, a horse, to all appearances quite well, separated from these cows only by a boarded partition, was found to have simultaneously with them a very fine pustular eruption. The necessity of inoculation supposed by M. Bouley really does not then exist; and this eruptive disease of the horse, which has been termed by him *vaccinogenous*, is really neither more or less than the analogue of the variola of man. It will be understood, then, that when M. Depaul affirms that vaccine virus has no existence, he intends simply to deny that the cow is its initial source.

REVIEWS.

Skin Diseases of Parasitic Origin. By W. Tilbury Fox, M.D. London: R. Hardwicke. 1863.

This work is stated to be one of a series of essays on skin diseases, intended to supply the want of a collective treatise in the English language. The author notices the present division of opinion as to the part that fungi play in disease, whether accidental or essential, and propounds a middle course which accepts both extremes with necessary reservations. He claims for his facts the character of trustworthiness, "since everything has been rejected which repeated observation has not satisfactorily shown to be true." In commencing, he proposes to simplify the confused nomenclature by adopting the generic name Tineæ for diseases of the surface necessarily connected with the growth of fungi. He considers that three conditions are essential to parasitic diseases:—1. A suitable soil. 2. A pathological lesion. 3. The cause of such lesion. The first of these he shows to be a weak cachectic habit predisposed to cutaneous disorder. The second and third, namely, eruption and parasite, are shown to stand in a relation of *concomitance*, the latter in its degree and kind being an index of the state of soil present. After a general outline of diseases other than true Tineæ complicated by the growth of fungi, and a notice of special conditions which determine the form and seat of disease, a detailed account is given of the fungi themselves and their microscopic characters. This is illustrated by numerous plates of good execution, judiciously arranged to show the relative size of the various structures. Two chapters on diagnosis and prognosis respectively terminate the first part of the work.

The second part commences with general remarks on the relationship of fungi, which deal at length with the principal moot points as to parasitic growths of every kind, and with the questions of identity of species which perplex the student of almost all the lower forms of organised life. The ordinary criteria of the Tineæ are next criticised, and a chapter follows of great interest as to clinical and experimental evidence tending to shew that the parasite of favus from lower animals, and even the yeast plant, are capable of transplantation into the human subject. A case, moreover, is given in which a patient affected with Herpes circinatus infected her Medical man, the author, with the evidences of incipient sycosis on the upper lip at the situation of some casual herpetic vesications.

The next division of the work deals with Entophytes, Torula, Sarcina, Oidium Albicans, Leptomitus, and the like; and the last chapter gives a full account of treatment, which is directed in principle—1. To alter the soil. 2. To kill the fungus, and prevent further mischief. 3. To promote the regrowth of the hair. Under the first of these headings come cod-liver oil, iron, and arsenic; under the second, setons, cleanliness, epilation, various parasiticides, especially bichloride of mercury and carbolic acid, iodide of sulphur, and linimentum aquæ calcis. Tincture of iodine is valuable in some cases. The method in which these remedies are to be employed is illustrated by the successful treatment of an old-standing and severe case entrusted to the author by Dr. Mackenzie.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, November 4, 1863.

Dr. Barnes in the Chair.

Dr. Ashford (Birmingham), Mr. Hammet Hailey (Newport Pagnell), Mr. Wm. Murphy (Willingham, Gainsborough), and Mr. R. B. Walters, were elected Fellows of the Society.

VAGINAL LITHOTOMY.

Mr. Baker Brown exhibited a calculus, weighing two ounces and five drachms, which he had removed from the bladder by vaginal lithotomy. The stone had apparently been in the bladder for eight years. It was removed through an incision extending from the neck of the bladder to near the os uteri. The wound was afterwards closed by seven silver sutures, and the patient recovered without a single bad symptom.

A paper, by Dr. Braxton Hicks, was read on

COMBINED EXTERNAL AND INTERNAL VERSION.

The author read a paper on his mode of turning, which might be called "bimanual version;" and brought forward twenty cases in which he had operated, including eight cases of placenta prævia, one of accidental hæmorrhage, and two in which he had changed arm presentations into cephalic, in both of which the children were born alive. After alluding to the discovery of the mobility of the fœtus made by the Germans, and also to the plan of pushing on the child by one or two fingers through the os, he proceeded to show the mode of combining both movements, by acting on both extremities of the child, with a much greater certainty as to the result in the majority of cases requiring version. He pointed out the principles on which the plan was based—viz., the mobility of the child in utero, varying according to the activity of the uterus; the position of a knee within a short distance of the os, when the child was transverse; the ease with which the breech was brought to the os with the foot upon it, when the child was already transverse. The movement of the child in utero was accomplished by pressing on one side of the breech at the fundus, in ordinary head presentations, by a series of gentle palpations; or by a gliding pressure on the abdominal parietes, so as to follow up the fœtus as it recedes under the impulse, by continuing of which the breech is brought to the middle of the uterus on one side; at the same time, the head is pushed up by a finger or two through the os, so as to raise it above the brim to the middle of the uterus on the other side. The child being thus more or less transverse, the knee can be generally easily seized; if not, the breech must be depressed to the os, and the foot secured. Dr. Hicks dwelt upon its easy application to placenta prævia, as shown in the cases he recorded; and stated that it was particularly of use in those cases where the os was so little dilated that the hand could not enter. He, however, laid great stress upon the importance of not using any more traction than the weight of the arm could produce, whereby the child was used as a plug, while time was given to rally the patient, for the os to dilate, and for the pains to come on. In almost every case he waited for natural efforts to deliver, only gently assisting. He had in none seen the slightest bleeding, internal or external, after the leg was once fairly through. Dr. Hicks then pointed out the mode of producing cephalic version, which he had found very practicable in certain cases of transverse presentation, by placing the head, already secured between the outside and inside hand, into the os, and retaining the external hand on the head till the uterus had moulded itself to the form of the head and shoulders. He also showed that this mode of pressing the head into the os was a means of restoring prolapse of the funis in some cases, as occurred in two cases recorded by him, and thought it would in similar cases be found to be a satisfactory mode of treatment. Allusion was then made to the advantages of early version, and to the class of cases to which it was applicable. The circumstances that arose to interfere with the plan were pointed out, and the means of combating them. The author remarked, that although in confirmed arm presentations it was scarcely possible to expect this plan to succeed, yet these cases need seldom occur to a vigilant Practitioner, as he had the means of avoiding such cases, if called early, by bimanual version. Perhaps the greatest value of this mode is the capability of version long before it can be performed by any other method.

Dr. Cleveland inquired whether, in practising the operation now recommended, the right hand could be employed within the vagina as well as the left. This was important, as many Practitioners were accustomed to use the right hand for manipulations, and to such the use of the other hand might prove awkward.

Mr. Baker Brown remarked that he had no doubt the plan recommended by Dr. Hicks would be found in many cases most useful, although at first more difficult than the old plan. He (Mr. Baker Brown) looked upon the operation of turning as one of the simplest and easiest in obstetric Surgery. In reply to the last speaker, Dr. Cleveland, he believed that the left hand should always be employed, because, the patient lying in the usual position on her left side, the convexity of the hand would pass readily into the hollow of the sacrum; whereas, if the right were used, it would be found very difficult to twist the arm round to introduce the hand with facility into the womb.

Dr. Broadbent related a case which occurred to him four years and a half ago, when resident obstetric officer to St. Mary's Hospital, in which he was compelled to resort to the method of turning described by Dr. Hicks, from the impossibility of effecting version in the ordinary manner. He was sent for to a woman in puerperal convulsions, so severe that, soon after reaching her, she was for a time supposed to be dead. As respiration became re-established, chloroform was administered. On examination, he found the posterior part of the os and cervix uteri affected with cancer, which involved so large a proportion of the circumference as to leave no hope of dilatation by the natural efforts. Deeming it necessary to effect delivery, he determined to turn. It was, however, impossible to introduce more than two fingers into the uterus, and these only by using a certain amount of force. His right hand was supporting the uterus externally, and the idea occurred to him to attempt the version by the co-operation of the two hands. The child was turned very readily; but great difficulty was experienced in getting the feet one after the other through the rigid os, and the head was extracted only after prolonged efforts. The child died from pressure on the cord; and the mother, becoming violently maniacal, and refusing all food, also died. He had been astonished at the ease with which the child was turned by the method in question, which, however, he had not subsequently again tried.

Dr. Hall Davis could from experience bear testimony to the practicability and value of the operation of turning the child by external manipulation, as proposed by Dr. Hicks. He must, however, confess that he had found Dr. Hicks's method most successful when conjoined with the introduction of two fingers of the left hand to hook down the knee, or of the entire hand when the foot could not otherwise be reached. In some cases he had found version by one foot impossible; he had then by bringing down the other foot effected his object with facility. In those cases of placenta prævia in which the patients had lost much blood, and turning was advisable, he thought the method now proposed, with or without the employment of two fingers internally, as circumstances might indicate, particularly valuable; as in these cases, from reflex action being in them more readily set up, the introduction of the hand into the uterus was attended with greater risk. Dr. Davis had in a few cases, to obviate turning, tested the practice of detaching the placenta from the cervix; but the hæmorrhage had continued. No fatal result followed, however, as the child was immediately brought down, and acted as a plug upon the bleeding orifices.

Dr. Greenhalgh mentioned a case in which he performed the operation of version by Dr. Hicks's method. He had adopted it at Dr. Barnes's suggestion, who had kindly given his assistance. The operation succeeded very well so far as the turning of the child was concerned, and the circumstances were such that turning by any other method would have been impossible; but the difficulty afterwards experienced in extracting the child—the pelvic inlet being very greatly narrowed—was so great that it was necessary to perform the Cæsarian section.

Dr. Barnes called attention to the extreme value of the paper as tending to advance the cultivation of the hand as an obstetric instrument. The case described by Dr. Greenhalgh was one in which the advantages of Dr. Hicks's method of turning were most remarkably illustrated. The pelvis was so contracted that it was simply impossible to do more than squeeze the two fingers in between the tumour and the symphysis pubis; yet the turning was fairly accomplished, although for want of space it was still impossible to grasp the foot which had been brought down. He (Dr. Barnes) had performed the operation of turning about 110 times during the last five years, and he might say that in almost every instance he had derived more or less assistance from the adoption of the principle of this method. That principle consisted simply in acting upon the two poles of the long diameter of the fœtus at the same time. Just as in the case of a Chinese ball contained within another, if you pressed upon one point only, the inner ball would not revolve; but if you pressed upon opposite poles in opposite directions at the same time, the ball would revolve easily: so it was with the fœtus in utero. The general application of this principle in turning had been developed in his practice gradually as difficulties arose. He had first been led by Dr. Simpson's recommendation to use the right hand externally to support the uterus, and then he was not long in discovering that the hand outside might often be made more useful in effecting version than even the left hand inside. Thus he had for some years put in practical operation the bimanual method, and had frequently turned without introducing more than two fingers into the uterus. But he was glad to acknowledge that he had not fully grasped the principle of the operation, nor carried it into practice with entire comprehension and accuracy, until after reading Dr. Hicks's excellent description. It was right to refer to the history of this operation in reference to the researches of others. In 1807, Wigand published an admirable memoir, in which he fully described the principle and method of turning by internal and external manipulations. But this memoir had been unaccountably neglected. Although his name was quoted, what he had written appeared to have produced little or no effect upon practice. The memoir had, however, of late years been translated into French, and from that translation Cazeaux had largely quoted in his System of Midwifery. Martin in 1850, and Esterle, an Italian professor, in 1859, since dead, appeared to have well understood the principle, But these and others generally preferred the cephalic version, and their writings, although quoted at times, had not influenced practice. In no text book, except Cazeaux's and Hohl's, was there any allusion to this improved method of turning. The speaker had acquired such confidence in its use, that, although he had been several times called in to exviscerate after other Practitioners had spent many hours in vain attempts to turn, he had never yet failed to deliver by version, and he had not yet been reduced to the unpleasant necessity of exviscerating. One secret of success lay in obtaining an accurate idea of the position of the fœtus; and here he would say that there was no true transverse presentation such as was figured in many text-books. In all these cases the fœtus lay obliquely in reference to the pelvic brim; the head was never far remote from the os uteri, the breech was elevated to a higher level than the head, and the knees were generally near the lower segment of the uterus—not far to seek, so that by pushing the shoulder and head on one side, whilst the external hand pressed down the breech, the fingers passed through the cervix might easily seize one or other of them. There was one point in the operation which he did not think Dr. Hicks had described with sufficient care. As soon as the knee was seized the mode of assisting by the external hand must be changed. At this stage the right hand should be brought down so as to receive the head in the palm, which should then be pressed upwards away from the brim and iliac fossa, whilst gentle traction should be exerted upon the limb grasped by the left hand. In this manner we had the full advantage of the principle of leverage upon the two extreme poles of the child, and the version is completed with remarkable ease. He had sometimes even been enabled by this manœuvre to elevate the head and shoulder from the brim in cases of extreme difficulty, so as to give space for the introduction of the hand, which was otherwise impossible. The obstacles to this method which he had found the most difficult to deal with arose in certain cases of dead children where decomposition had advanced so far as to destroy all elasticity and resiliency in the fœtal spine. Denman was, he believed, the first who clearly pointed out how the death of the child was *per se* a cause of difficult labour, and Hohl had very fully discussed this subject. To effect evolution by acting upon one or other or both poles of the long diameter of the child, it was essential that that long diameter—represented by the spine—should preserve a certain degree of rigidity or elasticity; otherwise, when traction was exerted upon a limb the only effect was to compress the fœtus into a mass which moulded itself to the resisting structures. Another difficulty arose in cases of premature labour, partly from the small undeveloped condition of the uterus, which impeded manipulation, and partly from the want of rigidity of the fœtus—also the result of immaturity—which led to its being compressed by the spasmodic contraction of the uterus into a compact ball. With regard to the use of this method of turning in placenta prævia, he fully recognised its merit. Although insisting upon the advantage of the principles of treating placenta prævia which he himself had introduced, he was always ready to avail himself, according to the necessity of the case, of other aids. The total detachment of the placenta was not true to physiology—it was bad in practice and quite superfluous; but the partial or cervical detachment was indicated, if for no other reason, to liberate the cervix and facilitate its dilatation, and therefore turning. As chloroform had been adverted to, he had one word to say upon that point. He fully recognised the value of this agent, and constantly derived signal advantage from its use; but the most positive experience had proved to him that unless full surgical anæsthesia were induced it sometimes rather obstructed than facilitated turning. With regard to the objection that had been urged to the bimanual method, that it was liable to cause metritis, he could only imagine that this arose from an utter misconception of the nature of the operation, inasmuch as it was only necessary to pass two fingers into the uterus, and the operation was accomplished with less force than by the old method. If violence had anything to do with causing metritis, the least violent proceeding must be the more free from that danger. So easy was it at times that he had on one occasion, in a case of placenta prævia, turned and delivered a child without passing more than two fingers into the vagina; he had not even turned back or soiled the cuff of his coat. In conclusion, he expressed his deep sense of the merit and usefulness of this memoir. He firmly believed it would exercise an important influence in improving obstetric practice in this country.

Dr. Graily Hewitt believed that all who had heard the paper now read before the Society would, however strongly prejudiced in favour of the older method of turning, have recourse to the bimanual method when suitable cases presented themselves. The author of the paper had brought the subject before the Society in a most able manner, and his statements were fortified by ample experience and observation. Dr. Graily Hewitt stated that he was unable to speak as to the value of the operation from personal observation. In all cases of turning, he had himself made very free use of the second hand externally, to steady the uterus, and so facilitate the operation, but he had not practised the "bimanual operation" in its entirety. It was undoubtedly a great object to do without the introduction of the entire hand into the uterus, but he would at the same time remark, as, indeed, the author had stated in his paper, that the risk attendant on introduction of the hand into the uterus had been very much over-estimated. He had frequently so introduced the hand, and had never seen the slightest injurious results. There was a point in reference to the operation of turning to which he would take occasion to allude—viz., the necessity for bringing down both feet; otherwise, as he had found by experience, great difficulty was liable to be encountered at a further stage of the delivery. In one case—that of a patient of St. Mary's Hospital Maternity, which he had attended, the difficulty in question was particularly observed, and he now made it a rule to secure both feet at first. The method of turning recommended by Dr. Hicks would be found most difficult of execution, as Dr. Hicks had stated, in cases of cross-birth where the arm presented and the uterus was forcibly contracted. In such cases, the introduction of the hand into the uterus would be absolutely necessary. He would beg respectfully to express his dissent from the opinion just announced by the Chairman as to the use of chloroform in such cases. In a case in which he had been called to assist a gentleman present, he believed, at this meeting, one arm and one leg lay in the vagina, and fruitless attempts had been made to complete the turning, the uterus being strongly contracted. In this case the effect of chloroform was most beneficial, allowing the introduction of the hand and the easy completion of the operation. In conclusion, he begged to express his obligations to the author of the paper for his interesting communication.

Dr. Hicks, in reply, wished it to be impressed upon those who thought the method so very difficult, that it was not so. In the first case in which he had resorted to it, version was exceedingly easy. He was pleased at the testimony afforded by the case related by Dr. Broadbent. He did not recommend this measure in every case, but advised that mode to be employed which was most readily applicable to each case. He still, notwithstanding Dr. Barnes's opinion, adhered to what he had stated in the paper concerning its advantages. With respect to Wigand, he must apologise to him for having only mentioned his name with others. He had merely read the English works upon his suggestions, in which no allusion whatever was made to the inner hand. In no English book was any mention of the plan made. As he had no knowledge of Wigand's paper, he could not say anything further. The allusion of Cazeaux to him had been made since the publication of his (Dr. Hicks's) first paper. He had not found the premature age of the fœtus any considerable obstacle to delivery. Many of the cases brought forward in the paper were premature, and no particular hindrance was observed. In answer to Dr. Cleveland, he would state that the right hand could be easily used instead of the left, if the patient were placed on the right side.

Mr. Robert Hardy related

THREE CASES OF RETROVERSION OF THE UTERUS.

The cases presented features of interest from their rarity, and from other peculiarities. The first was a case of retroversion of the uterus, with prolapsus of the vagina, occurring immediately after delivery at the eighth month of utero-gestation. There was also retention of urine. By pressing back the tumour and keeping the bladder empty a cure was effected. In the second case there was retroversion of the gravid uterus about the fourth month, associated with ovarian tumour of the left side. The abnormal position of the uterus was rectified by manipulations, and the patient went to the full term. Unfortunately the patient died fourteen days after labour from strangulation of the intestine, which had become glued by inflammation round the pedicle of the tumour. The third case related was one of retroversion of the uterus with excessive hæmorrhage. The uterus was reduced to its normal position and the ovum extracted, the patient recovering perfectly. The woman thought herself near the end of gestation.

HARVEIAN SOCIETY OF LONDON.

November 5, 1863.

Dr. J. B. Sanderson, Vice-President, in the Chair.

Dr. Cleveland made some remarks upon the period at which premature labour ought to be induced in cases of albuminuria.

Dr. Drysdale mentioned a case where the diagnosis of ascites and ovarian disease seemed to him to be doubtful.

A paper, by Mr. Ernest Hart, Ophthalmic Surgeon to St. Mary's Hospital, was then read, on

SOME OF THE DISEASES CONSTITUTING THE CONDITION COMMONLY CALLED AMAUROSIS.

Mr. Hart said that amaurosis was not one, but many diseases, and that by the ophthalmoscope it was possible to distinguish in their early stages those deep-seated alterations in the choroid, retina, humours, and interior vessels of the eye, which, without it, could only be guessed at, but which, separately or in different combinations, constituted the variety of diseases leading to blindness, without change in the external appearance of the eye, called amaurosis. Upon their diagnosis and treatment, in their early stage, rested the possibility of saving the patient's sight; if they were so recognised, sight could now, in the majority of instances, be saved; if they were not, it was lost. The subject was so wide that he proposed only to describe one or two of the most common conditions, selecting those which frequently occurred to all engaged in general practice, and were liable to be overlooked. Mr. Hart then showed the appearance presented under the ophthalmoscope by the first streaks of cataract. The chapters in ophthalmology which dealt of the difficulty of diagnosis between cataract (commencing) and amaurosis might be cancelled; for, with the ophthalmoscope, the diagnosis might be made absolute. He then proceeded to distinctions between "muscæ," or black spots before the sight, the indications either of functional disease or of grave organic disease. Their diagnosis was precise, while their treatment differed wholly, and it was important to establish it, for whereas the organic opacities of the vitreous humour constituting muscæ were often benefited by specific antisyphilitic treatment, functional muscæ might be greatly injured by such means. Mr. Hart then passed on to a serious class of amauroses, of which the early premonitory symptom was increasing short sight, with some uneasiness of the ball, and, perhaps, slight lachrymation. These were the first outward signs of congestive inflammation of the choroid, productive of posterior sclero-choroiditis, with staphyloma or pouching of the tunics of the eye around the optic nerve entrance. The use of glasses, while it alleviated the inconvenience, aggravated the progress of the disease. It was one of incredible frequency; if arrested, its worst consequence was more or less short-sightedness, but it frequently progressed, leading to atrophy of the yellow spot, detachment of the retina, ocular apoplexy, vitreous opacity, and fluidification, and sometimes to (complicated) cataract and glaucoma. It was a fertile source of the inveterate amaurosis of advanced life. In every case of advancing short sight, the fundus of the eye should, as a matter of simple justice to the patient and Practitioner, be examined. For there were two kinds: in the one glasses were beneficial, in the other they were injurious, and should only be used exceptionally, and with minute precautions. Mr. Hart detailed the means which he used to arrest this form of disease, and gave notes of cases. He then referred to an insidious form of amaurosis, of which the characteristic ophthalmoscopic sign was retinal pigmentation, the retina looking like a tiger's skin. Of this he demonstrated, ophthalmoscopically, a strongly marked case, where the disease had been progressing unsuspected for eighteen years; sight was nearly extinct. The earliest outward sign was dimness of vision at night, often observed in early life; the appearance of the eye remained unaltered, and the progress of the disease was slow, secret, and painless. Mr. Hart then demonstrated examples of the various forms of disease of which he had been speaking by the aid of a fixed ophthalmoscope, which he used in Hospital teaching; by its means those present were able to see and appreciate the changes which were taking place at the back of eyes otherwise apparently healthy-looking.

WESTERN MEDICAL AND SURGICAL SOCIETY.

FRIDAY, NOVEMBER 6, 1863.

Mr. PRESCOTT HEWETT, Vice-President, in the Chair.

MR. T. HOLMES exhibited a boy, aged 8 years, with

CONGENITAL EXTROVERSION OF THE BLADDER,

or covering which he had performed two plastic operations. The first operation consisted of placing over the exposed mucous membrane a cover composed of two layers of integument, one taken from the groin, the other from the right scrotum, each in itself large enough to cover the cleft. The former flap had been folded down like the leaf of a book, with its skin surface towards the mucous membrane. The latter had been turned horizontally with the skin surface outwards, over the inner flap. The edges were united by silver sutures. The upper edge of the united flaps had been emplanted into the skin of the abdomen, so that only the lower edge of the cleft remained open. The flaps united well, but the upper border did not, so that urine could escape by that way. The second operation was to remedy this, and the flaps were united to the skin of the abdomen by the hare-lip suture. This succeeded almost entirely, and a very little opening now exists. It is proposed to narrow the gap at the lower part of the flaps, and adjust to it an india-rubber bottle to catch the urine. Drawings were exhibited of the case before and after operation, also of a case operated on by Professor Pancoast, of Philadelphia. Mr. Holmes referred to three other cases that he had himself operated on, one an infant. The first operation succeeded, but the child died in the country of fever. One, a boy, aged 7 years, and the third still under treatment. The flaps, otherwise well uniting, in the two last cases have been interfered with by phagedæna. Mr. Holmes, having stated that the object is to cover as effectually as possible the mucous membrane, and arrange for catching the urine, said that the operation was most easy and likely to be successful in infants, from the nature of the tissue, from smaller flaps being required than later in life, and the less chance of difficulty from co-existing hernia.

Dr. CAHILL then gave two cases of

CLOT IN THE PULMONARY ARTERY,

the symptoms of both cases being much the same. One patient, a young lady, having some spinal disease, and subject to rheumatic affection of the joints, was seized with violent dyspnœa and some struggling before death. The clot was found filling up one division of the pulmonary artery. The other patient was a lady with many large and hard varicose veins of the lower extremities. She was seized with dyspnœa, just like the preceding patient, and recovered, but has shown other symptoms since then of obstruction in the circulation.

The PRESIDENT mentioned a patient who had great œdema from venous obstruction in all four limbs successively.

Mr. KEEN mentioned a case of

POISONOUS SYMPTOMS FROM CANNABIS INDICA.

The patient, a Medical man, with some epigastric pain, for which he generally took morphia, had swallowed four grains of cannabis Indica. Mr. Keen found him sitting up, in horror at being touched, suffering great anxiety. Pulse steady, full, and soft, 92. Temperature natural. Pupils natural. Muscular power much in abeyance. Under the use of stimuli and sinapisms he soon improved.

WEST KENT MEDICO-CHIRURGICAL SOICETY.

FRIDAY, OCTOBER 16.

INAUGURAL ADDRESS BY WILLIAM CARR, F.R.C.S., PRESIDENT.

IN occupying this chair as your President, my first duty is to offer you my thanks, my second to promise you my best services. On me, too, you have conferred the additional honour, and for the first time exercised, of opening the session by an inaugural address. It is to me a subject of sincere regret that these honours have not fallen on some more worthy member of our Society, and one who from his position is more accustomed to the use of his vocal organs. To none, however, will I yield in the sincere desire to promote the immediate objects of this Society,—sound and practical information on all matters which affect us as Practitioners of Medicine. Will you permit me to ask who have been my predecessors in this chair? and with you to review very briefly their histories and teachings. Our first President was for many years a General Practitioner in this borough, having settled here in the early part of the present century. He came a stranger, and without fortune, but not without a practical knowledge of his art, which he had mainly acquired at St. Bartholomew's; and he was very assiduous. In the course of years he rose to eminence, and was esteemed alike by the Profession, his patients, and the public, and, after a life prolonged beyond the mean duration, died rich in worldly and social honours. His successor, who is still with us,—and may he long remain so,—began life, after a sound Medical education in the North, in general practice, settling in a neighbouring village. He, too, held his fortune and hopes in his head and heart, yet, by steady application to the path of duty, soon won his way to success and moderate fortune.

What learn we from these examples? Surely these things: that success is certain if we conform to just and right principles; if we aim primarily at doing good; if we practise the golden rule of doing to others as we wish others to do to us. Let the successful fail not in the performance of his duties, and those who are still on the threshold live in the assurance that they shall yet do well.

With your further permission I will ask what are the objects contemplated by gatherings such as ours? One of the most apparent is this: that men engaged in the same calling are brought into personal acquaintance; secondly, that intercourse develops an honourable rivalry; thirdly, that communications stimulate observation and reflection; fourthly, that the results of personal observation and reflection are brought before the tribunal of Professional opinion; fifthly, that each observer profits by the labours of his neighbours. Surely such are worthy of our consideration, and will well repay the time and labour devoted to the Society. Here it will not be inappropriate to pass in review the varied and useful papers which have formed our mental food in the past year:—"Ascites, with special reference to Treatment," by Dr. Bristowe; "Diphtheroid Disease of the Throat and other Mucous Membranes," by W. Carr; "Obstinate Constipation," by Dr. Purvis; "Constitutional Syphilis," by Dr. Wilks; "Gonorrhœal Rheumatism," by Dr. Rooke; "Erysipelas of the Face," by Dr. Farre; "Cases of Turning by the New Method," by Dr. Hicks. Remark, first, that all are of a practical nature, and bear on the daily duties of Medical life; and, in the second place, that treatment of disease, prevention, and cure, formed the leading features of all. Discussion, easy and free, always follows the lecturer; consequently, points of importance are dwelt on, errors pointed out, and good must result.

In no active calling is there greater need of free discussion and an open press than in ours, where each Practitioner exists, *ipso facto*, an absolute despot. We need, then, some arena to ventilate our opinions of theory and practice; to place before others, and to compare ours and others' labours. And we may fairly boast of our freedom and the good temper with which our discussions are conducted, and, as such, how they stand in contrast to discussions in the other learned professions. In one, discussion is followed by the most violent animosity; in the other, further appeals to other courts result. In one, where "peace and good will to all men" ought to reign, the proverbial "odium theologium" rules; in the other, such is the glorious uncertainty of discussion, that the proverb obtains, "better lose an ounce than a pound." We may, then, take comfort to ourselves amid our milder differences. We can compare our results with one another and derive good, even although we have uncontrolled authority, and are left to interpret for ourselves.

The latter reflection shows how vast are our responsibilities, how deep our obligations, and which we can only measure and properly estimate by a consideration of the value of human life, the most precious of God's gifts.

As practitioners, it may be not otherwise than useful if we inquire what are the aims and objects of Medicine viewed as an art; and secondly, as a science.

First. In what sense Medicine is an art. From the cradle to the grave man is liable to disease, to interruptions of health, and to accidents from his various surroundings. We no sooner inspire the breath of heaven than we begin to die. *Nascentes morimur, finisque aborigine pendet.* Now, to combat these tendencies and evils is the aim of Medicine as an art. Science may light up the dark and often hidden path of the why and the wherefore, but art, as an applier of the means, must do the work. If the stomach becomes disturbed we administer a corrective, if the limb be broken we order rest after adjustment; in both these cases simply assisting nature. Here we are generally safe, and the happy means of accomplishing an unmixed good. In this light the art which we practice in accordance with a system of established rules, varied, of course, by individual opinion, enables us to perform a large amount of duty. It is in Surgery, however, that art is more especially regarded, the methods of proceeding here being more accurately defined than in Medicine, strictly so called.

The Practitioner, be he Medical or Surgical, who so performs his duties, and foregoes the more exalted pleasures of combining his art more or less with the teachings of science, surely only half performs his office; for there can be no correct application of art without the guidance of science. I do not mean to say that a splint cannot be applied without a correct knowledge of mechanics, the anatomy of the parts involved in the accident, and the whole process of reparation, but I do say, and here I speak as well for you as myself, that he is undoubtedly the best Surgeon who is as well up in theory as in the rules of adjustment of the lesion of continuity, and hence is it true that, as a Profession, we cannot be too well educated—we cannot have our views too broad or too scientific—we cannot be too well versed in the rules of practice.

The difficulties of acquiring all that we need to know to make us good Practitioners are only surpassed in importance by the vastness of our duties and responsibility.

We have the directing of all matters which tend to advance the health and well-being of the public, as well as our individual duties as private Practitioners. Vast and important as the former are, I will not detain you by a further reference to them, but will ask you to tarry with me, and with me to contemplate our responsibilities as civil Practitioners. Now, the real object of our Profession is to do good, and to relieve our fellow-man when he is stricken down by disease. And a more exalted, I had almost said, or more holy calling, I know not. From the highest exemplar, who went about "healing the sick and doing all manner of good," to the lowest in our ranks who performs aright his appointed duty, there is an abnegation of self, and its immediate reward, proving that "it is more blessed to give than to receive." I do not say that our reward ought to rest here, but I do reiterate the opinion that the highest reward is found in the satisfaction of having done good. The so-called honours of the world reach very few members of our Profession, but we are rich in good men, notwithstanding—men who have done more to advance human progress, to sweeten the cup of human life, and to soften its passage of decline, than all the other professions put together. There are few subjects affecting man's well-being which have not been harbingered or adopted and improved by Medical men; few new paths of literature or science; few national, or domestic, or social advances made which have not derived counsel and help from men whom we delight to call brethren.

And yet, although the rewards of Medicine are small, its sons can always claim and obtain a fair and honourable position in society; can always live; and, at any rate, avoid those frightful avalanches which too often fall on other men. If we obtain not the wealth and elevation of some, we escape the appalling downfalls of others. Our path may be always happy—happy in the discharge of honourable duties.

This cannot, however, be the lot of those who, whilst professing to be with us, are not of us. If men who are tempted by a false and unsound faith to seek fame or wealth amid the follies of systems which stand in opposition to common sense; or if they fail in the performance of duty, there can be but one result, and that must be sooner or later evidenced in shame and misery, and we may leave them to their just rewards. For ourselves, we mean to practise our Profession in keeping with the laws of honour and common sense; not rejecting novelties, not declaiming against sound inquiry, but favouring it; and, above all things, in diligent search after truth, and in the full assurance that our labours shall not be in vain.

THE air is full of rumours in the highest degree detrimental to the character of Enrolling Boards. And we regret to be obliged to acknowledge that many of those rumours, sustained by strong circumstantial evidence, implicate examining Surgeons. Substitutes have been accepted with every conceivable external, and easily recognised disability. We have seen a substitute passed by a Surgeon to one of our city Enrolling Boards who was upwards of fifty years of age, had the appearance of an imbecile, and who was suffering at the time of enlistment from the following formidable list of maladies, viz., 1. Epileptic seizures repeated every two or three days; 2. Tertiary syphilis; 3. Large hæmorrhoids; 4. Stricture of the urethra; 5. Varicose veins in both legs. Such manifest dereliction of duty is disgraceful in the extreme, and merits the severest punishment. Not less unfavourably does the statement of the Provost-Marshal reflect upon our Profession, that of the 200,000 men discharged on Surgeon's certificate of disability one half were unfit for service when received. But we were prepared for the revelation of these facts. The examination of recruits was too loosely conducted to detect any but the most apparent disability.—*American Medical Times.*

LEGAL INTELLIGENCE.

⁂ The very important decision of the judges of the Court of Queen's Bench (Westminster, November 24), in the following case will be received with unmixed satisfaction by the Profession. It will be seen that it allows no appeal from a decision of the General Medical Council as to what constitutes "infamous conduct in a Professional respect," unless it can be proved that the Council in giving judgment has been actuated by corrupt motives, or that the accused person has not had a fair opportunity of defending himself. The Profession therefore possesses within itself a supreme court of morality, whose decisions cannot be set aside, and which holds the power of punishing offenders by depriving them of all Professional rank and standing.

EX PARTE LA MERT v. THE GENERAL COUNCIL OF MEDICAL REGISTRATION AND EDUCATION.

This was an application under the new Medical Act of 1858, which provides that if any registered Medical Practitioner shall be convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or shall, after due inquiry, be judged by the General Council to have been guilty of infamous conduct in any Professional respect, the General Council may, if they see fit, direct the registrar to erase the name of such Medical Practitioner from the register (sec. 29). The name of the applicant, Mr. La Mert, had been erased from the register on the ground that he had been guilty of "infamous conduct in a Professional respect:"—1. In publishing an indecent and unprofessional treatise, entitled "Self-Preservation," etc.; 2. In having stated that his son, "a Licentiate of the Royal College of Physicians," had been jointly concerned in the authorship of the work. On an affidavit of the applicant, setting forth that he himself had studied and passed examinations at Edinburgh, and that his son was a Licentiate of the College of Physicians at Edinburgh; that the subject of the work in question was one necessarily incident to Medical practice and science; and that the work itself was not more indecent than was necessarily incident to the nature of its subject, or than other works treating of similar subjects.

Mr. Chambers, Q.C. (with him Mr. Barnard), moved on his behalf for a *mandamus* to the Council to restore his name to the register, insisting that the publication of the work in question formed no sufficient ground for the erasure of his name, as if he had been guilty of "infamous conduct in a professional respect." The learned counsel was about to enter into a comparison of other works by other eminent Medical men, when

The Lord Chief Justice said he desired to be informed what authority the Court had to interfere in such a matter. The words of the statute were—"shall have been judged by the Medical Council to have been guilty of infamous conduct." The Council were to judge on the matter, and their decision was to be final and conclusive. Unless it could be shown that there had been corrupt and improper conduct, or an utter absence of all fair and proper hearing and all opportunity of defence, the Court could not interfere.

Mr. Chambers said that gave the Council a very formidable power.

Mr. Justice Blackburn observed that, nevertheless, the Court had no more power to interfere than in any other case of conviction of a crime by any lawful tribunal.

Mr. Chambers urged that the Court was bound to look at the book to see if it were indecent, or if its publication was infamous.

The Lord Chief Justice: No, no. That is for the Council to judge.

Mr. Justice Wightman: The practitioner is to be judged by the Medical Council, not by this Court.

Mr. Justice Blackburn: The applicant has been heard, though not by counsel or attorney.

The Lord Chief Justice: And the Council had the book before them.

Mr. Chambers said that if the Court were clear that they had no jurisdiction he would not press the matter.

The Lord Chief Justice said the jurisdiction was placed by the statute in the General Council; they had decided the matter, and this Court could not interfere. The Legislature had in its wisdom thought proper to intrust the Council with the powers to be exercised under this enactment, and the Court could not review their judgment.—Rule refused.

EX PARTE SERGEANT.

In this case the Medical Council had removed the applicant, a Surgeon, of Plaistow, he not having answered their letter of inquiry according to the provisions of the Act, the letter having miscarried through a change of address.

Mr. James now moved for a *mandamus* to the Council to register him *de novo*, he tendering the proper fee for registration.

The Court granted a rule *nisi*.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Gentlemen having undergone the necessary Examinations for the Diploma were admitted Members of the College at a meeting of the Court of Examiners on the 19th inst., viz.:—

Albert Edward Boulton, L.S.A., Horncastle; Matthew Leach, L.S.A., Wisbeach; Hutchinson Royes Bell, Endsleigh-street, Tavistock-square; Lewis Frederick von Stieglitz, Tasmania; and George Frederic Heaton Julius, Richmond, students of King's College. Cleveland Smith, Horslydown; Charles James Treuerry, Gibraltar; and Frederic McNair, London, of Guy's Hospital. Frederic John Hawthorn, Uttoxeter, Staffords.; Wm. Richard Rogers, Oxford; and George Weller, Mile-end-road, of the London Hospital. Thomas Sibley Stott, Holloway, and Connell Whipple, Plymouth, of St. Bartholomew's Hospital. Henry Fly Smith, M B. Oxon, Cornwall-terrace, Regent's-park, and Isaiah A. Mosely, Newcastle, of St. George's Hospital. Andrew O'Flynn, Sligo, and Thomas Edward Digby Ffrench, Galway, of Dublin. Edward Barton Shuldham, Cheltenham, of University College. John Fulton, M.D. Cobourgh, Canada, and Henry Cornelius Libbey, Fulneck, near Leeds.

Admitted Members on the 20th inst.:—

William Gallimore Hayden, L.S.A., High Wycombe; Augustus Reeve Senior, Richmond; and James Fuller, L.S.A., Rectory-place, Woolwich, students of the Charing-cross Hospital. Ebenezer Diver, M.D. St. Andrews, Yately, Hants; William Godfrey Watermeyer, Cape of Good Hope; and Frederic Nash, Rayston, of University College. Francis James Ryder, L.S.A., Greenwich; and Richard Edward Cooke, L.S.A., Southwell, Notts., of St. Thomas's Hospital. William Henry Vipan, Ely, Cambridgeshire, of Guy's Hospital. James Atkinson, Hyde, near Manchester, and Alexander Murray Bligh, Liverpool, of the Dublin Schools. William Snowdon Hedley, M.D. Edin., Alnwick, Northumberland, and Ralph James Forbes Leith, Mintlau, Aberdeenshire; Philip Justus Ludwig Lichtenberg, M.D. Gottingen and Berlin, Finsbury-square, and Emil Julius Baetcke, M.D. Gottingen and Leipzic, Finsbury-square, of Gottingen. James Gwyther, M.B. Lond., and L.S.A., of Manchester.

NAVAL SURGEONS.—The following Members of the London College of Surgeons passed their Examinations for full Surgeons in the Royal Navy at a meeting of the Court of Examiners of that College on the 19th inst., viz.:—

Thomas Roberts Warren, of the Plymouth Division of Royal Marines, Diploma of Membership dated December 15, 1852; James Alexander Skene, of H.M.S. *Cumberland*, at Sheerness, May 19, 1856; and Thomas Kipling of H.M.S. *Canopus*, at Devonport, April 15, 1859.

SURGEON DENTISTS.—The following Gentlemen having passed the necessary Examinations, received their Diplomas in Dental Surgery at a Meeting of the Board of the Royal College of Surgeons of England on the 25th inst., viz:—

James Scholefield, Huddersfield; Henry Morley, Derby; William Robert Stuck, Bedford-street, Bedford-square; Robert Edward Stewart, Rodney-street, Liverpool; John Nathaniel Manton, Grosvenor-street, Grosvenor-square; Frederick William Zinkgraf, Rhine, Bavaria; Lancelot James Myers, Charlotte-street, Fitzroy-square; Edward Pounell Bastard Bromley, Southampton; Gavin Young, Edinburgh; Andrew Aaronson, Judd-street, Brunswick-square, and Leopold Moore, Grosvenor-street, Grosvenor-square.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, November 19, 1863:—

James Crichton Browne, Edinburgh; Henry Gillert, Birmingham; James Gwyther, Manchester; Samuel Duckering, Grantham.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BETTS, GEORGE H., M.D. Aberd., has been appointed Medical Officer to the Holloway and North Islington Dispensary.

BRABAZON, WILLIAM P., L.K.Q.C.P.I., has been elected House-Surgeon to the Southern Dispensary, Liverpool.

BREWER, T., M.R.C.S. Eng., has been elected House-Surgeon to the Huddersfield and Upper Agbrigg Infirmary.

CARSON, A. T., M.D. Edin., has been unanimously elected Medical Officer and Public Vaccinator to the Articlave Dispensary district, in the Coleraine Union, Co. Londonderry.

Cookworthy Joseph C., M D. Edin., has been appointed Consulting Physician to the Plymouth Public Dispensary.

Hall, Marriott, M.R.C.S. Eng., has been appointed House-Surgeon to the General Infirmary, Sheffield.

Harman, J., M.R.C.S. Eng., has been elected Resident Medical Officer to the Brixton, Streatham, and Herne-hill Dispensary.

Helsham H., M.D., has been elected Medical Officer to the Brixton, Streatham, and Herne-hill Dispensary.

Hopgood, Thomas, M.R.C.S. Eng., has been elected Mayor of Chipping Norton, Oxfordshire.

Kettle, H., M.R.C.S. Eng., has been appointed Resident Medical Officer to the Birmingham and Midland Free Hospital for Sick Children.

Morgan, William W., M.D. St. And., has been elected Mayor of Newport, Monmouthshire.

Morton, T., M.B., has been elected Medical Officer of the Kilburn Dispensary.

Nelson, Samuel C., M.D. St. And., has been appointed Surgeon to Her Majesty's Household.

Robertson, D. Argyll, M.D. St. And., has been appointed Surgeon to the Southern Eye Dispensary, Edinburgh.

Turnour, Arthur E., M.D. Edin., has been re-elected Mayor of Denbigh.

Tyner, George St. G., L.R.C.S.I., has been appointed Resident Surgeon to Dr. Steeven's Hospital, Dublin.

Way, Frederick Walter, M.R.C.S. Eng., has been appointed one of the Honorary Medical Officers of the Royal Portsmouth, Portsea, and Gosport Hospital.

Willis, George, M.D., Glasg., has been re-elected Mayor of Monmouth.

DEATHS.

Angell, Henry, M.R.C.S. Eng., at 3, Norfolk-crescent, Hyde-park, W., on November 19, aged 61.

Barrett, Ferberd T., M.R.C.S. Eng., at Kingston Bagpinge, Berks, on November 18, aged 35.

Burton, Frederick J., at Brisbane, Queensland, on August 30, late House-Surgeon, Brisbane Hospital.

Caudle, John, M.R.C.S. Eng., at Meeting House-lane, Brighton, recently.

Day, Mark Rowland, M.R.C.S. Eng., at the Royal Infirmary, Manchester, on November 17, aged 36.

Hamilton, William G., M D., at the Royal Infirmary, Dundee, on November 14, aged 22.

Norris, John H., M.D. Glasg., at Trindon-house, Durham, on November 23, aged 54.

Prichard, William, L.S.A., at 65, Charing-cross, London, S.W., on November 21.

Russell, Richard Croker, Surgeon R.N., at Eckington, Derbyshire, on November 22, aged 41.

Stevens, James P., Surgeon, at Winterbrook, Wallingford, Berks, on November 21, aged 88.

Underwood, Thomas, M.D. Glasg., at Douglas, Isle of Man, on November 10.

Wilson, George, M.D. Edin., at Alnwick, Northumberland, on November 12, aged 49.

Pharmaceutical Society.—The next Pharmaceutical meeting will take place on Wednesday evening, December 2, at 8 o'clock. The chair will be taken at 8·30 precisely. The following papers will be read:—"On a New Kind of Matico," by Professor Bentley; "On the Acetic Acid of the Three Pharmacopœias," by Henry Deane, F.L.S.; "Upon the Administration of Bismuth in a Soluble Form," by C. R. C. Tichborne, F.C.S.; "On Goa Powder," by Mr. David S. Kemp; "Note on the Recovery of Essential Oils from their Watery Solution," by Mr. T. B. Groves; "Note on the Root-Bark of Calisaya," by John Eliot Howard, F.L.S.; "Note on *Cassia moschata*," by Daniel Hanbury, F.L.S.

Testimonial to Mr. Clarke, on Appointment as Staff-Surgeon H.M.S. "Saturn," late of H.M.S. "Blenheim."—A few weeks ago the inhabitants of Hazelbeach presented a handsome gold locket to the above gentleman, for his uniform kindness and generosity during his residence among them. The locket is very chaste, and bears the following inscription:—"Presented, September, 1863, to R. W. Clarke, late of H.M.S. *Blenheim*, by the inhabitants of Hazelbeach, as a token of respect and esteem for his many acts of kindness," and was accompanied by the following address:—"The inhabitants of the village of Hazelbeach beg to present to Dr. Clarke this small but affectionate tribute of their esteem for his character as a gentleman, and for the many acts of gratuitous professional services he has on all occasions rendered to his poorer neighbours whilst a resident among them."

Prizes Offered by the Society of Arts.—The Swiney Prize for the best work on jurisprudence will be adjudicated by the College of Physicians and the Society of Arts on January 20, 1864. It consists of a silver goblet of the value of £100 sterling, containing gold coin to the same amount; and it is adjudicated every fifth anniversary of Dr. Swiney's death. Two prizes of £25 each, and the Society's medals, are offered for the best designs for cottages to be built at a cost not exceeding £100 each. Among the 114 subjects for which the Society's medals are offered are: The manufacture of a brilliant green not containing arsenic, copper, or other poisonous material; the manufacture of chlorophyll from grasses suitable for dyeing of a green colour, and the manufacture of green dyes from tar.

Scarlatina in Pigs.—Dr. Letheby's Report on the sanitary condition of the City of London during the quarter ending September last contains the following:—"The number of deaths from scarlet fever has increased from 24 to 56. This is the largest mortality from the disease in any summer quarter of the last eight years, and, although it has declined to some extent since the last quarter, when the mortality was 68, yet it has prevailed, as in the rest of England, to an unusual degree. Even swine have been affected with the malady, for the City sanitary inspectors have seized and condemned the carcases of many pigs that had died from it, or been slaughtered while suffering from it, and had been sent to the London markets for food."

Dublin Obstetrical Society.—The twenty-sixth annual Session of the above Society was opened in the Pillar-room, Rotunda, adjoining the Lying-in Hospital, on Saturday evening, the 21st instant. There was a very large assemblage of members and associates, and of Pofessional and non-professional visitors. The chair was taken by the outgoing President, Dr. Beatty, who delivered an interesting address upon ovariotomy, and its recent introduction into Ireland. In his concluding remarks he alluded to the great prosperity which had resulted to the Society since the adoption of its new and more liberal constitution. Finally, he had great pleasure in resigning his seat to the newly-elected President, Dr. John Denham, the present able and courteous Master of the Dublin Lying-in Hospital. Dr. Denham having taken the chair, the thanks of the Society were given by acclamation, on the motion of Dr. McClintock, to Dr. Beatty for his dignified conduct during his period of office, and for his zealous exertions at all times in promoting the welfare of the Society.

The Corporation of London *v.* the Governors of St. Bartholomew's Hospital.—At the Court of Queen's Bench, Westminster, November 23, Sir Fitzroy Kelly, Q.C. (with him the Common Serjeant, Q.C., Mr. Bovill, Q.C., and Mr. Archibald), moved, on the part of the Lord Mayor and Corporation, for a rule for a *mandamus* to the treasurer and governors of "the House of the Poor in West Smithfield, in the suburbs of the City of London, of King Henry VIII.'s foundation," commonly called St. Bartholomew's Hospital, to admit W. A. Rose, Esq., to the office of President of the said house. Sir Fitzroy stated the substance of the charters and orders, so far as they bore upon the question, and said that no question had ever before been raised as to the qualification of the presidents being what the Corporation contended. The records of the Corporation had been diligently searched, and no evidence was discovered tending at all to throw doubt upon their claim. The Court granted a rule *nisi*.

Starved to Death.—Public attention has been called by a letter signed "Physician" in the *Times* of the 24th inst. to the case of a man who was taken up by the police as intoxicated, but was, in reality, dying from starvation. He had no food given him, was locked up in a cell for the night, and the next day was sent to the Union. When brought there, the only words he could speak were "Henry Lerry," supposed to be his name. He was emaciated to the last degree, "and when his shoes were taken off the skin peeled off with them." He became unconscious, and died that night. The remarks of "Physician" entirely coincide with those we made last week on the case of the epileptic who was taken up by the police on a charge of drunkenness. He writes:—"The police, I submit, with most unjustifiable and ignorant presumption, took upon themselves to discharge a duty which should only have devolved upon an authorised Medical Practitioner. It is well known that insensibility may arise from several causes besides intoxication, and that in many cases what is commonly termed apoplexy cannot easily be distinguished from alcoholic poisoning. Surely, Sir, our policemen—very respectable and useful men in their line—are not to be entrusted with the decision in such cases! Dr. Champneys, the Medical officer of the Workhouse where the poor victim of that police mistake was received, has put forth a sort of apology for the police. What he states is, no doubt, perfectly correct. He says, 'The police might easily have mistaken his state of insensibility for the result of intoxication.' Very likely. But no properly educated and experienced Medical man would have decided so rashly and so dogmatically as the police. I conclude by asking the question, 'Was the Surgeon of the police sent for? If not, why not.' "

COURT OF QUEEN'S BENCH IN IRELAND. — DR. COURTENAY *v.* CHARLES HUNT, R.M.—In our Number for January 17 last (p. 73) we briefly alluded to a case of suspected poisoning, which, at the time, engaged much public attention in the North of Ireland. An adjourned inquest was held upon the 22nd of that month, but the coroner's jury having returned an open verdict, Mr. Hunt determined to institute a searching inquiry, and it having been alleged that the deceased, Miss Amelia Cary, had died in consequence of improper medicine supplied to her by her Medical attendant, Dr. Courtenay, Mr. Hunt required that gentleman to enter into recognisances. The investigation was held on January 29 and February 6, and issued in Dr. Courtenay being discharged from his recognisances. Dr. Courtenay afterwards obtained from the Court of Queen's Bench a conditional order to allow criminal informations to be filed against Mr. Hunt "for having acted corruptly, maliciously, and wilfully" against him in the course of the inquiry alluded to. Subsequent proceedings having been taken, the court, on Monday, November 23, unanimously allowed the cause shown against making absolute the conditional order, and being of opinion that there was nothing to warrant the imputations of misconduct against Mr. Hunt, granted costs against the plaintiff.

NORTH STAFFORDSHIRE MEDICAL SOCIETY.—This society, which meets several times during the year, when papers on Medicine and the collateral Sciences are read and discussed, objects of interest exhibited, etc., held its annual meeting on the 19th inst. at the North Staffordshire Hotel, Stoke-upon-Trent, when the usual address was delivered by the President (Dr. Arlidge). He first of all briefly reviewed the society's proceedings for the past year, and then, from some very carefully compiled statistics, obtained in the course of his practice as Physician to the North Staffordshire Infirmary, adduced certain interesting and important statements relative to the sanitary condition of "potters," from which it would seem that scrofulous affections prevail to an alarming extent, brought on chiefly by certain kinds and conditions of work, and, as a matter of course, an unhealthy offspring is very frequently generated. In the course of the address, the President solicited the cordial co-operation of the members, with a view to the perfection of their knowledge on this subject, of such vital importance both to the Profession and the public. A hearty vote of thanks was given to the President for his services during the year, and for his very able and interesting address. The election of officers for the ensuing year ended thus:—*President*—W. H. Folker, Esq., Hanley. *Treasurer* — James Yates, Esq., Newcastle-under-Lyne. *Honorary Secretary*—Ralph Goodall, Esq., Silverdale. *Committee*—Walter Acton, Esq., Newcastle-under-Lyne; Robert Garner, Esq., Stoke-upon-Trent; Samuel Goddard, Esq., Burslem; John Scott, Esq., Hanley; and Joseph Walker, Esq., Burslem.

ALLEGED ILLEGAL DISPOSING OF BODIES.—A very shocking case has appeared in the daily papers during the past week. The sequel would probably warrant the conclusion that the unfortunate accused was throughout labouring under mental aberration. A Mr. Charles Law, L.S.A., described as a Surgeon, of 24, Virginia-row, Bethnal-green, was charged on Monday last, at the Worship-street Police-court, with unlawfully disposing of the dead body of a female child by throwing it into an unfinished building in the King's-head-yard, Kingsland-road, Shoreditch; and also with having in his possession the dead body of another female child, with the intent of unlawfully disposing of it. The Act under which the charge was made was the 60th section of the 24th and 25th of Victoria, cap. 100:—"If any woman shall be delivered of a child, every person who shall, by any secret disposition of the dead body of the said child, whether such child died before, at, or after its birth, endeavour to conceal the birth thereof, shall be guilty of a misdemeanour, and, on being convicted thereof, shall be liable, at the discretion of the court, to imprisonment for any term not exceeding two years, with or without hard labour." It appeared from the evidence of the police that the prisoner was seen, at eleven o'clock on Saturday night, throwing a body of a female child into the building, and, on his being searched, the body of another female child was found in the pocket of his great coat. When taken by the police, he said, in reference to the body he had thrown away:—"The woman who was delivered, I believe, is in Nottingham, but I did not deliver her myself. I know that I am wrong in disposing of bodies in this way." The second body he gave no account of. Both bodies were about the same size, but the second was more fresh than the other. Mr. Clewin Griffiths, Divisional Surgeon, said:—I was called by the police to the station on Saturday night, and saw the dead body of a female child. It was a premature child, born about a week. At a quarter to twelve on Sunday morning another child was brought to me. I cannot at present undertake to say whether they had breathed or not, as I have not yet made a post-mortem examination. Mr. Ribton, who appeared for the prisoner, said his client had long been a Licentiate of the Apothecaries' Company, and as such a charge should not be kept hanging over him longer than needful, he thought the case should be speedily concluded, as the Old Bailey sessions commenced on Monday; and at all events, if it was determined to send him for trial, and he should hereafter have to dispute the applicability of the Act to the prisoner's case, he trusted that bail would be taken. Mr. Leigh, the magistrate, said that it was undoubtedly a case for a jury, but he would accept bail, which would be the prisoner himself in £80, and two sureties in £40 each. On Wednesday it was announced to the magistrate at Worship-street that Mr. Law was in a state of raving madness. The *Times* report of Thursday states:—"There could not be much doubt of the prisoner suffering from mental derangement, for, though calm and collected when first brought to the court, he afterwards became restless and excited, and Bendall, the gaoler, heard him complaining to prisoners in other cells that his own cell was getting filled with water, and that he should be drowned. Refreshment was more than once offered him, but decisively refused, the prisoner saying he had come there in a cab, and if he went away in a van his family must go with him. So strong was his impression of water being round him, that when the gaoler went to take him out of the cell, he expressed great apprehension that he would be drowned, as he saw a stream of water running between them. He, however, did not complain of illness, and Bendall thought this strange conduct assumed for a purpose, but when his bail came to be answerable for him he became dull and absent, and seemed to pay little or no attention, or to understand what either they or the officer said to him. An inquest will be held on Wednesday." In the absence of information as to Mr. Law's previous condition and habits, it would be wrong to hazard conjecture as to what led to the course of conduct which attracted the notice of the police. The police stated that a number of dead bodies of infants had been found in the neighbourhood. But this might have been stated with equal truth of Hyde-park and a dozen other localities. Mr. Law had held several public appointments, amongst others that of Resident Medical officer and out-door Surgeon to the City of London and East London Dispensary.

BOOKS RECEIVED.

Address on Public Health. By Professor R. Christison, V.P.R.S.E. Edinburgh: Oliver and Boyd. 1863. Pamphlet. Pp. 32.

*** As we have before stated, this address calls the attention of sanitarians to the existence of a "recondite cause, a change in epidemic constitution," which governs the production, or determines the prevalence, of different epidemic or zymotic diseases in different seasons. What the conditions may be,—heat, cold, dryness, damp, electricity, ozone—or what combination of these determines the prevalence of certain diseases in certain seasons, is unknown. We know not why small-pox shall rage one year, and scarlet fever another. If we grant the necessity of specific contagion, we know not why that contagion shall be virulent in one year more than in another. We must therefore accept Dr. Christison's caution, not to be too sanguine in ascribing every amelioration of public health to "sanitary measures," inasmuch as some diseases have independent and still unknown causes of prevalence and decrease. This is especially the case with the fever and diarrhœa which are traced to filth. For, contending as we do that filth is a cause of fever and diarrhœa, we do not know the exact condition which (the amount of filth being equal) shall cause it to breed typhoid fever at one time and place and not in another. We have visited some very filthy places in Scotland at a time when typhoid prevailed there. If mere filth would have produced it, the fever ought to have sprung up last year, or at any time past. On the other hand, if, according to the extremely ingenious and logical theory of Dr. W. Budd (which, by the way, Dr. Christison does not notice), *contagion* is the element wanted to explain the case, we cannot see how and why the fever ever ceases. Scabies is always present in some places, so are pediculi; but even the former is more prevalent at some times than at others, and is, we believe, very prevalent in London now. Admitting, then, the existence of an epidemic *quid ignotum*, and thanking Dr. Christison for the hint, we can but deprecate the tone of a considerable part of his address as scarcely worthy of his reputation, and injurious to his country. How much nobler would it have been to have pressed on the great work of land and house drainage, and to have encouraged labours such as those of Gairdner at Glasgow, which are beginning to wipe off the reproach under which Scotland has so long laboured? Suppose the sanitary school have claimed too much, have they therefore done nothing? As for recondite causes, we are powerless. But common sense dictates that we should set to work with brooms and whitewash, and soap and drainage, and remove those sources of mischief which we can get at.

On the Immunity enjoyed by the Stomach from being Digested by its own Secretion during Life. By F. W. Pavy, M.D.

⁎ The stomach may be digested after death, why not during life? Hunter of course replied, because of the *principle of life*. This evasion, however, is met by Claude Bernard's experiment, showing that living frogs' legs, and living rabbits' ears, introduced through a fistula into a living dog's stomach, may be and are digested. Others have asserted the epithelium to be the protecting power; but if the epithelium of a portion of stomach be removed, the patch is not digested. Dr. Pavy's explanation is that acidity is necessary for digestion, and that a tissue sufficiently supplied with alkaline blood cannot be digested. If the vessels of the stomach of a living animal be tied, the stomach is digested, if the contents of that stomach be acid enough. The frog's leg and rabbit's ear have not vascularity enough to protect them. This is an able specimen of physiological argument, resting on experiments, which, however justifiable, do really curdle one's blood.

A Treatise on Modern Median Lithotomy, being a Description of its Introduction, Reception, and Progress. By G. Allarton, M.R.C.S., formerly Deputy Coroner for South Staffordshire. London: H. Renshaw. 1863.

⁎ This writer, who proposes to revive the process of median lithotomy, which for two centuries has been disused, revives also to some degree the tone and spirit of the old Surgical works. Being himself convinced of its superiority, he attacks with considerable vehemence all who differ from him, and does not hesitate to ascribe such difference to base or interested motives. With the exception of this old-fashioned violence, the work is of practical value, although all readers may not concur in the statement that, "the rapid progress we have made in the sensation sciences the last few years would lead us to hope and believe that this age of sensation will soon die out; and that the lithotomy knife, the trapèze, and the tight-rope will disappear with it."

Die Pathologie und Therapie der Rachitis. Von Dr. Gottfried Ritter von Rittersham. Privat Docenter und verstand der Medicinischen Klinik in Prague. Mit 4 Topeln Abbeldungen. Berlin, 1863. August Hirschwald. Pp. 315.

The Journal of Mental Science, published by authority of the Association of Medical Officers of Asylums and Hospitals for the Insane. Edited by C. L. Robertson, M.B. Cantab., and H. Maudsley, M.D. Lond. October, 1863. London: John Churchill and Sons.

⁎ This number opens with a good paper on the Classification of Insanity, by Dr. Skae, followed by a memoir on Private Asylums, and one on Homicidal Insanity. Some clinical cases, reviews, and a quarterly report of psychological medicine, with general news, complete the volume.

The First Principles of Natural Philosophy. By W. T. Lynn, B.A., of the Royal Observatory, Greenwich. London: Van Voorst. 12mo. 1863.

⁎ A good concise introduction to Statics, Dynamics, Hydrostatics, Pneumatics, and Optics. Demonstrations of all the principles laid down are given, "so far as perfectly satisfactory ones are known; and no mathematical reasoning is employed out of the reach of one who has read the early books of Euclid and ordinary elementary algebra."

On the Treatment of Syphilis and other Diseases without Mercury, being a Collection of Evidence to Prove that Mercury is a Cause of Disease, not a Remedy. By C. R. Drysdale, M.D., etc. London: Baillière. 1863.

⁎ Dr. Drysdale is one of several able men who are undoubtedly doing medicine good service by a thorough sifting of the evidence in favour of this powerful drug, which plays a large part in English practice. Foreigners may cease to describe us as "Un Anglais, avec son calomel et son Harvey sauce." It is beyond question that mercury has been far too liberally administered since the time of Hunter, and has produced evil results. But the sweeping statement of Dr. Drysdale's title-page is perhaps rather too reactionary.

The Evils Resulting from the Intermarriage of Relations. By Dr. Hector Helsham, F.R.C.S. London: W. H. Collingridge, Aldersgate-street.

⁎ Pamphlet, pp. 19. Assumes sometimes what it ought to prove—that "all hybrids are barren," an assertion disproved by the leporides. It really yet remains to be proved that intermarriage of relations, or breeding in and in, produces deaf-mutism if both parents be healthy. The history of the cleft palates amongst the offspring of the larger carnivora bred in this country shows other influences at work.

Some Account of the Vacuum Apparatus of Dr. Theodore Junod, of Paris, in a letter to a friend. Pamphlet, pp. 16. London: W. Hunt and Co., 23, Holles-street, Cavendish-square.

⁎ Junod's Boot is the well-known gigantic dry-cupping apparatus, capable of relieving congestion in internal organs, by damming up blood for a time without the waste of vivisection.

On the Investigation of Instinctive Movements. By William Murray, M.D. Newcastle-on-Tyne. 1863.

⁎ A reprint of a paper read before the Physiological Section of the British Association. After a rather complex classification of movements in man into volitional, emotional, and reflex, and their compounds, including "volitiono-emotiono-reflex" movements, it is contended that "emotion is the prime mover in calling forth instinctive acts," and that those of animals differ from those of man only in degree.

Transactions of the Pathological Society of London. Vol. XIV. 8vo. 1863.

⁎ This volume fully maintains the high reputation of the Society, adding to what is already one of the best collections of cases extant.

A Manual on Extracting Teeth. By Abraham Robertson, D.D.S., M.D. London: Trübner and Co. 1863.

The New Zealand: a Handbook or Guide to the Britain of the South. London: E. Stanford, 1863. Pp. 130. Sixpence.

⁎ A readable and interesting little work, apparently issued by a firm that owns passenger ships. It is just the book for persons who think of emigrating. We cannot, however, agree with the writer's bloodthirsty denunciation of the natives, against whom a savage war is just lighted up, brought on by our own misdeeds. The English taxpayer should refuse to pay for these miserable wars, the offspring of colonial greed.

Elements of the Anatomy and Diseases of the Teeth. By H. T. K. Kempton, F.L.S., etc. London: Hardwicke. 1863. 8vo.

Scritti Medici. Editi ed Inediti di Francesco Casorati. Vol. I. Pavia. 1863.

Balneologische Notizen über die Kurmittel des Badcs Reiner in Schlesien, etc. Von Dr. Hermann Beigel. 8vo. Erlangen. 1863.

Manchester and Salford Sanitary Association. Report of Sub-committee on the Adulteration of Food.

Reports of the Medical Officer of Health for the City of Glasgow to the Board of Police. April, July, and October, 1863. Glasgow: Robert Anderson, 85, Queen-street.

The Dental Review. November, 1863. London: Robert Hardwicke, Piccadilly.

The British Journal of Dental Science. November, 1863. London: John Churchill and Sons.

NOTES, QUERIES, AND REPLIES.

He that queſtioneth much ſhall learn much.—*Bacon.*

Dr. Mapother's valuable lecture shall be noticed next week.

J. D.—Edgware-road, corner of Harrow-road.

Chlorodyne.—It will be seen that the advertisement has been altered.

Inquirer.—You cannot do better than go to the London Hospital; you will find there every variety of disease, Surgical and Medical.

F. R.—You will obtain an excellent Medical education at any of the London Hospitals. We cannot recommend one in particular. All the required information will be found in the Students' Number of the *Medical Times and Gazette* (Sept. 19). When you have made choice of a Hospital, the Lecturers will give you advice as to books, etc.

An Assistant Surgeon.—It is competent to any one to make suggestions, but if there is not the slightest reason to suppose that the suggestions will ever be carried into effect, it is waste of space to notice them. The plan for remodelling the Army Medical Department lately circulated by a Deputy-Inspector we do not think will ever be accepted. It starts with doing away with all Regimental Medical appointments—a proceeding which we believe would be as injurious to the interests of the officers and men of a regiment as it would be subversive of the social comfort of the Medical officer.

The Norfolk Giant.—Robert Hales, known as the Norfolk giant, died at Great Yarmouth on Sunday last. Hales was born at West Somerton, a village a few miles from Yarmouth, in 1820, and was therefore only 43 years of age. He came of a family remarkable for their great stature, his father, a farmer, being 6 feet 6 inches in height, and his mother 6 feet. An ancestor of his mother's was said to have been that famous warder of bluff King Hal, who stood 8 feet 4 inches in height. Of such Patagonian parents the progeny were worthy: the boys were "sons of Anak," averaging 6 feet 5 inches each, and the girls, of Amazonian development, averaging 6 feet 3½ inches each. Robert was the flower of the flock, and stood 7 feet 6 inches, weighing 452 lbs. One of his sisters, with whom he exhibited some years ago, was 7 feet 2 inches, but she died in 1842, being then only 20 years of age. Hales was stout in proportion to his height, though somewhat clumsily put together. When in his prime he was 64 inches round the chest, 62 round the waist, 36 across the shoulders, and 21 round the calf of the leg. During his career he visited several continental capitals, and was presented to Louis Philippe while King of the French. He was introduced to the Americans under the auspices of Barnum, and "drew" immensely, 28,000 persons having flocked to see him in ten days. On his return to this country he had the honour of being presented at Court, when her Majesty gave him a gold watch and chain, of which he was particularly proud, and wore to the day of his death. During last summer he came to Yarmouth for the benefit of his health, which had been very much impaired by the close confinement of the caravans in which he exhibited. He seemed to rally under the genial summer weather, but as autumn wore on he gradually declined, and died on Sunday morning, the disease which proved fatal to him being consumption.—*Express.*

Art may be too Anatomical.—The following remarks of Canon Pope deserve to be considered by artists who carry anatomical forms to excess, and by some members of our Profession who seem to think that the showing of "muscles" is the perfection of art. Canon Pope has evidently read Sir Joshua Reynolds, and the works of Robert Knox:—"We should be careful not to commit an error into which many have fallen—that of mistaking a forcible expression of the passions, extraordinary emotion, oratorical excitement, or extravagant gesture, as triumphant proofs of exalted genius. They are false criterions of merit. They are ignored in the school of the antique and classic style. They are never he emanations of the highest culture, but are the creations of a vitiated taste. Calmness and repose are ever the domain of the dignified and sublime. The expression of dignity is ever inseparable from tranquillity. Tranquillity is the middle state between pleasure and pain, and within its limits alone is found the seat of dignity, neither elated by the one nor depressed by the other. The most remarkable example with which my memory just now serves me, as illustrative of the accuracy of these observations, is that treasure of the antique, that most triumphant effort of Grecian art, the statue of the Laocoon in the Vatican Museum. No effort of the human mind can conceive an accumulation of mental agony and excruciating bodily suffering more revolting, and calculated to convulse the muscles and nerves, than that two enormous hideous serpents should creep up out of the sea, encircle the bodies of the father and his two beautiful sons, crush them within their tortuous coils, gnawing through their very vitals, and emitting their baneful poison into the crimson tide of life. Nevertheless the gigantic genius of the artists, guided by the classic taste of ancient Greece, introduces no extravagant gesture, no distorted writhings, no exaggerated expressions of agony. No, the noble father is represented as if endeavouring to subdue the expressions of excruciating pain, which are involuntarily escaping from the marble countenance, and, by a vigorous effort to preserve tranquillity and calm resignation, display a fortitude which elevates his soul above all his accumulated woes. No expression of suffering or vivid display of the passions could convey so exalted an idea of dignity; and by thus treating their subject they afforded the most convincing proof of their genius, and achieved that greatest triumph of art which has crowned with immortal fame the three artists of Rhodes who executed it—Polydorus, Athenodorus, and Agesandra. Whilst gazing on that prodigy of art, we shudder at the mere idea of being subjected to such a climax of agonising woe, and at the same time we almost envy the trying condition of Laocoon, which afforded him an opportunity of manifesting such generous resignation, such dignity of deportment, such nobility and sublimity of soul!"

Erratum.—Our attention has been drawn to an error in our article on Mr. Jeffrey Marston's paper on Fever. The year in which the Malta Garrison was raised by the Expeditionary Force to the Crimea was 1856—not 1859—when the number of the garrison was 9331, and the number of fever cases 2464. The numbers given in the paragraph refer to the year 1859.

ALCOHOLIC STIMULANTS IN FEVER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The principles involved in the subjoined narration are so important both to the public and the Profession that I hope you will deem it worthy of a place in your journal, and that it will provoke an expression of opinion from the Profession generally, and from those also who entertain what are termed "teetotal" opinions.

There is no subject that has received more careful consideration than that of the administration of alcoholic stimulants in disease, especially disease of an adynamic type, and as a mistake on either side is death to the patient, the subject cannot be too frequently discussed or the correct practice too absolutely determined.

On Thursday, November 12, I was called upon to visit R. G., a painter, between 60 and 70 years of age. I found him in the following condition:—He lay upon his back; his body was covered with the true rash of typhus fever—mulberry-coloured spots, slightly elevated, etc.; the pulse scarcely perceptible; extremities cold; the tongue dry, brown, and glazed, and the mind wandering. He was, in a word, dying exhausted in the last stage of typhus fever. I was informed that he had been ill a fortnight, and had been attended by a Medical man who had been called in in consequence of my illness, and that he had been very sick during the last day or two. I inquired whether he had had any wine or brandy, and was informed that his Medical attendant had strictly prohibited all alcoholic stimulants, that he had visited Mr. G. a short time before my arrival, but did not suggest the propriety of giving him either wine or brandy. Believing, as I do, that wine is essentially necessary in the treatment of typhus, I heard this with astonishment and horror, especially as the form in which death was coming to this poor man was that of asthenia, and the exhibition of stimulants of the strongest kind seemed to me to be urgently required. I administered some wine, it did not cause vomiting, and directed the attendants to give brandy and milk every five or ten minutes, and the mist. vin. gallic. I called several times during the day, but the patient died in sixteen or eighteen hours from my first visit.

I cannot but think that the prohibition of stimulants in this case destroyed all chance that the man may have had of recovering from the prostration and exhaustion induced by the typhus fever, and I believe there is no principle of treatment more universally recognised by the Profession than that the group of symptoms enumerated above indicate the most profound asthenia and imperatively require the active administration of alcoholic stimulants, and that to neglect or omit them is to neglect and omit the only mode of treatment that can afford any chance of recovery.

A few days after the patient's death I saw the gentleman who had attended him before I was called in, and asked for an explanation of his views. He said that he admitted that Mr. G. died of exhaustion and typhus fever, but that he did not think wine or brandy necessary in the treatment of that disease, and that the opinion of the Profession was divided on the subject. I have stated the facts fairly, and, as I was accompanied by another qualified Practitioner, am able to corroborate my testimony on that subject; my opinion of the nature of the disease and the manner of the death is not impugned, and I now ask,—Is it true that the opinion of the Profession is divided on the subject of the administration of wine or brandy in typhus or any other disease where the tendency to death is by asthenia? It is impossible to overrate the importance of the question. Life and death are on the issue.

I am, &c. THOS. MASSEY HARDING.

High-street, Stourbridge, November 18.

COMMUNICATIONS have been received from—

HARVEIAN SOCIETY; Mr. G. A. SHEPPARD; APOTHECARIES' HALL; Dr. FREDERICK J. BROWN; Mr. CARTER BLAKE; Dr. R. DUNDAS THOMSON; Dr. ANSTIE; Dr. MURCHISON; Mr. HULKE; Dr. J. W. BLACK; Dr. W. O'CONNOR; Dr. H. S. HOUNSELL; Mr. RALPH GOODALL; Mr. J. LUMLEY EARLE; Dr. DEVENISH; J. D.; INQUIRER; Mr. T. H. HOOPER; WESTERN MEDICAL AND SURGICAL SOCIETY OF LONDON; ANTI-HUMBUG; Mr. J. HUGHES; Dr. RICHARDSON; Dr. GRAILY HEWITT; Mr. WAY; F. R.; PHARMACEUTICAL SOCIETY.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 21, 1863.

BIRTHS.

Births of Boys, 999; Girls, 971; Total, 1970.
Average of 10 corresponding weeks, 1853-62, 1692 4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	756	719	1475
Average of the ten years 1853-62	681·5	685·2	1366 7
Average corrected to increased population..	..	..	1503
Deaths of people above 90	..	7	7

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	2	2	15	3	3	10	..
North ..	618,210	7	6	24	4	14	12	2
Central ..	378,058	6	..	23	1	4	4	1
East	571,158	3	1	28	2	8	23	3
South ..	773,175	2	3	29	6	12	19	5
Total.. ..	2,803,989	20	12	119	16	41	68	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·967 in.
Mean temperature	48·6°
Highest point of thermometer	56·2
Lowest point of thermometer	39·4
Mean dew-point temperature	44·6
General direction of wind	S.W.
Whole amount of rain in the week	0·13 in.

APPOINTMENTS FOR THE WEEK.

November 28. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

30. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital 1½ p.m.; Samaritan Hospital, 2½ p.m.

MEDICAL SOCIETY OF LONDON, 8½ p.m. Lettsomian Lectures.—On Midwifery and Diseases of Women. Lecture II.—Symptoms—Mode of Examination—Sound, Uterine Kinometer—Auscultation—Sources of Error in Diagnosis, from hardness, souffle, thrill—Menorrhagia as a symptom tested, source and causes—Differential Diagnosis from Pregnancy—Tests of Breast Symptoms—From Ovarian Disease, etc. By C. H. F. Routh, M.D.

December 1. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

ANTHROPOLOGICAL SOCIETY OF LONDON, 8 p.m. Dr. James Hunt, F.S.A., Pres.A.S.L., "On the Negro; his Place in Nature."—Adjourned discussion.

PATHOLOGICAL SOCIETY, 8 p.m. Meeting.

2. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m

HUNTERIAN SOCIETY, 8 p.m. Dr. Peacock, "On Some Cases of Slowness of Pulse, with Remarks."

OBSTETRICAL SOCIETY OF LONDON, 8 p.m. Papers by Mr. Marley, Dr. Earle, Dr. Braxton Hicks, Dr. Gervis, Dr. Barnes, and Mr. Baker Brown.

3. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

HARVEIAN SOCIETY, 8 p.m. Clinical Discussion, "On Diphtheria."

4. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

MEDICAL SOCIETY OF LONDON, 8 p.m. Meeting of the Council.

WESTERN MEDICAL AND SURGICAL SOCIETY OF LONDON, 8 p.m. Dr. Gibb, "A General Discourse on Affections of the Throat, with the Practical Use of the Laryngoscope."

ORIGINAL LECTURES.

PROFESSOR HUXLEY'S LECTURES
AT THE
ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

VII.—*The Skulls of Mammalia.*

(Continued from p. 531.)

FIG. 49.

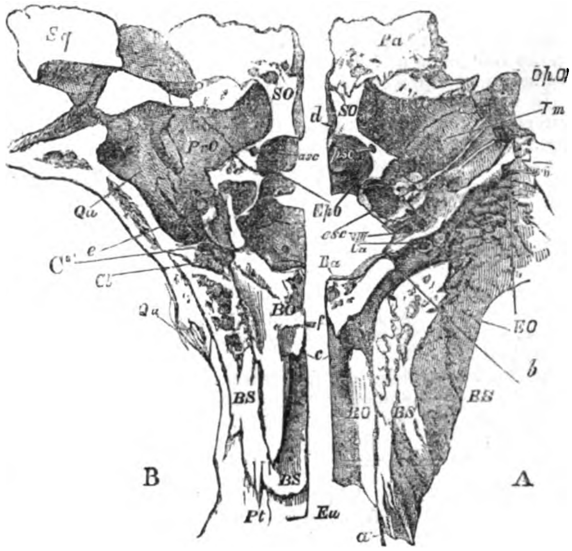


FIG 49.—Vertical and transverse sections of the left tympanic cavity of *Crocodilia biporcatus.* A, posterior, B, anterior, segment; *a*, bristle passed into the small lateral Eustachian passage leading from *b*, the posterior tympanic passage which opens into *c*, the common Eustachian passage; *d*, a bristle thrust into the air-passage which traverses the supra-occipital; *f*, bristle passed into the anterior tympanic passage; *Ca,Ca'*, carotid canal; *Cl*, fossa for the extremity of the cochlea; *Tm*, inner division of the tympanic cavity.

Of the vast multitude of modifications undergone by the Mammalian skull, I select for comment in this place only a few of the most important, such as, 1stly, those which are the result of unusual forms or combinations of bones in skulls not otherwise abnormal. 2ndly. Those which are exhibited by the skulls of the higher Mammals as compared with the lower. 3rdly. Those which are presented by what may be termed aberrant Mammalian, skulls, *e.g.*, the crania of the *Monotremata*, *Proboscidia*, and of the aquatic *Mammalia*, the *Sirenia*, *Phocidæ*, and *Cetacea*.

I am not aware there is any example among the *Mammalia* of the bones of the roof, or lateral walls, of the two posterior segments of the skull taking any share in the formation of the floor of the cranial cavity. On the other hand, a careful study of development will probably show that it is no uncommon circumstance for the orbito-sphenoids to unite together in the middle line, so as to exclude the presphenoid from the cranial floor, or even to supply its place entirely.

A still more remarkable deviation from the typical arrangement than this occurs in certain Mammals, and has been thus noted by Cuvier (Leçons ii., p. 319). "La lame cribleuse de l'ethmoide dans tous le *Makis*, dans les *Loris*, et les *Galagos*, vient toucher comme dans l'homme, au sphénoide antérieur; tandisque dans les singes elle en reste éloignée en arrière par le rapprochement des deux côtés du frontal."

I find the union of the frontals to which Cuvier refers in this passage to take place in *Cynocephalus*, *Macacus*, *Cercopithecus*, and *Semnopithecus*. The frontals, however, do not really separate the presphenoid and ethmoid, but only form, above the junction of these two bones, the front part of a thick osseous bridge, the hinder part of which is contributed by the orbito-sphenoids.

The Gorilla agrees with the monkeys and baboons in these respects. Thus, in the adult male Gorilla in the Museum of the Royal College of Surgeons, the distance from the anterior boundary of the *sella turcica* to the anterior end of the cribriform plate of the ethmoid is 1·4 in. Of this extent of the base of the skull, 0·35 in. is occupied by the conjoined orbito-sphenoids, 0·42 in. by the coalesced frontals, and 0·6 in. by the *lamina perpendicularis* of the ethmoid. But, in a vertical section, the ethmoid is seen to extend back under the basi-cranial processes of the frontals (which are not more than one-fifth of an inch thick) as far as the suture between the orbito-sphenoids and these processes, which end anteriorly in a free rounded, transversely concave ridge, constituting the posterior boundary of the olfactory fossa. Laterally, the basicranial processes of the frontals arch downwards for a short distance and unite with the lateral masses of the ethmoid.

In the Gorilla, the frontal bridge is much smaller than in the lower Catarhines. The Chimpanzee approaches Man still more nearly; a triangular process of the presphenoid interposing itself between the frontals and joining the ethmoid. Sometimes, however, very small processes of the frontals just unite over this junction. In the Orang, the frontals are widely separated, as in Man.

The epiotic, pro-otic, and opisthotic bones are always anchylosed into a single periotic bone in the *Mammalia;* but they unite with the other elements of the temporal bone, and with the adjacent cranial bones, in very various modes, and the tympanic cavity presents very different boundary walls in different Mammals.

In the Beaver, as we have seen, the tympanic and periotic bones are anchylosed into a single "*tympano-periotic,*" which remains unanchylosed with the squamosal, and is easily detached. In the *Sirenia* and in *Cetacea* (sooner or later) the same anchylosis takes place, but the tympano-periotic is still less firmly fixed in its place, and in some *Cetacea* does not appear at all in the interior of the skull, in consequence of the growth of the adjacent bones towards one another over it.

In the Rhinoceros, Horse, and Sheep, the tympano-periotic long remains unanchylosed to the surrounding bones, but is so wedged in between them as to be practically fixed within the walls of the skull.

In *Echidna* and in *Orycteropus* the periotic, the squamosal, and the tympanic remain perfectly distinct for a long time, if not throughout life.

In the Pig the squamosal and tympanic anchylose into a single "*squamoso-tympanic,*" which is firmly fixed to the adjacent bones; but the periotic remains free, and consequently readily falls not *out of*, but *into* the skull.

In the nine-banded Armadillo (*Praopus*) it is the periotic and squamosal which are anchylosed, the tympanic remaining rudimentary and free; and the Opossums and the Tapir exhibit a similar arrangement.

Other *Mammalia*, such as the *Carnivora* and *Primates*, have the squamosal, tympanic, and periotic all anchylosed together into one "*temporal bone.*"

Even in one and the same order the constitution of the tympanic cavity exhibits the most remarkable differences. To take the *Edentata* as an example:—

In the *Orycteropus* the walls of the tympanic cavity have a wonderfully reptilian arrangement; the periotic is very large in proportion to the other bones of the skull, and its plane presents comparatively little inclination, so that its exterior face looks more outwards than downwards. A large part of its posterior and outer face is seen, as a *pars mastoidea*, upon the exterior of the skull, between the supra occipital, the ex-occipital, and the squamosal, but there is no distinct "mastoid process;" below, it comes into contact with the basi-occipital and basisphenoid; in front, with the alisphenoid. The latter bone is strongly convex outwards, so as to present a posterior, as well as an external, face; the posterior face forms the front wall of the tympanum, and exhibits a somewhat deep excavation, or alisphenoidal air-cell.

The squamosal, a very large bone, is divided by a well-marked ridge into an upper face, which constitutes part of the roof, and an outer face, which forms a portion of the lateral wall of the skull. The latter enters into the outer and upper wall of the tympanum; the former, very thin, constitutes the roof of that cavity, abutting internally upon the supra-occipital and parietal. The Fallopian canal is open for the greater part of its extent, and a hook-like osseous process which overhangs its outer and posterior part gives attachment to the hyoid.

The tympanic is a strong hoop of bone, incomplete above, and much shorter anteriorly than posteriorly. By its expanded anterior end it articulates by an interlocking suture with the squamosal. The thin posterior end is free.

In *Myrmecophaga tetradactyla* (and essentially the same arrangement obtains in the great Ant-eater), the squamosal, as in *Orycteropus*, enters largely into the wall of the cranial cavity; but the tympanic, which is large and bullate, is anchylosed with it. The tympanic, however, forms only the outer part of the posterior wall of the tympanum, the inner and posterior walls of that cavity being furnished by a downward process of the basi-occipital, while its inner and anterior wall is formed partly by the pterygoid and partly by the alisphenoid. These two bones inclose a great air-cell, which communicates freely with the tympanic cavity behind. In front, it is closed by a thin bony partition, which separates it from a second large air chamber, inclosed, partly by the alisphenoid and pterygoid, and partly by the palatine.

In the genus *Manis* there is a large *bulla*, formed altogether by the tympanic, which, in moderately young skulls, at any rate, is not anchylosed with the adjacent bones.

The squamosal is an immense bone, extending from the ex-occipital to the orbito-sphenoid, and entering into the lateral walls of the skull for that extent. Its posterior part, dilated and convex outwards, contains a large air-cell, which opens into the roof of the tympanum by a wide aperture. The plane of the periotic is nearly horizontal. It is a relatively small bone, and only a small part of it appears on the base of the skull, behind the tympana *bulla*, the squamosal completely hiding it externally.

Of the Armadillos, some, like *Euphractus*, have a tympanic bulla of the ordinary construction, with, occasionally, a very long external auditory meatus, while others, such as the nine-banded Armadillos (*Praopus* of Burmeister), have a mere hoop of bone open above, almost as rudimentary as that of *Echidna*.

Or, if we turn to the perissodactyle *Ungulata:*

In the *Rhinoceros*, the periotic and tympanic early anchylose together, but remain distinct from the surrounding bones, the compound tympano-periotic being only wedged in between the squamosal, ex-occipital, and other adjacent cranial bones, in such a manner that it cannot fall out. The "*pars mastoidea*" is completely hidden, externally, by the union of the squamosal and the paramastoid process of the ex-occipital over it. The region itself, however, is very well developed, and is continuous, internally and below, with a very strong, conical, somewhat curved, styloid process, to the flattened, free base of which the hyoidean apparatus is attached.

The tympanic element is very singularly formed. It has the shape of a very irregular hoop, open above and behind, and much thicker at its anterior superior than at its posterior superior end. The former, irregular and prismatic, is anchylosed with the periotic, just behind and above the auditory labyrinth; it then splits into two divisions, an anterior and inner and a posterior and outer. The anterior, acquiring a thick and spongy texture, curves round to form the front part of the wall of the tympanum, and then ends in a free, backwardly-directed apex, without becoming in any way connected with the periotic, or with the posterior division. The latter, much thinner and denser, curves downwards and backwards in the same way, and also remains perfectly free, but its hinder end is prolonged into a flat process, which bends for a short way round the base of the styloid process. The outer wall of the tympanum is therefore very incomplete in the dry skull, opening forwards and downwards, first, by the fissure between the anterior branch of the tympanic and the periotic; and, secondly, by the cleft between the two divisions of the tympanic.

Posteriorly, there is a large irregular aperture between the hinder end of the anterior branch of the tympanic and the periotic. Externally there is no bony auditory meatus—or rather the merest rudiment of one.

The Horse presents a very different structure. There is a tympano-periotic bone which is wedged in between the squamosal and adjacent bones, and not anchylosed therewith; but the *pars mastoidea* appears largely on the outside of the skull between the post-auditory process of the squamosal and the paramastoid, and the tympanic element consists of a complete *bulla*, with a long external auditory meatus. The styloid process is almost completely infolded by a vaginal process furnished by the auditory meatus, and the tympanic is altogether anchylosed to the periotic, posteriorly.

No Tapir's skull which I have examined has presented any trace of an ossified tympanic bone. (a)

In the Horse, most Primates, Carnivores and Rodents, the tympano-periotic fissure is closed, either by the close apposition, or by the actual anchylosis, of the inner lip of the tympanic to the periotic.

But, in the Sheep and Pig, this fissure becomes a wide elongated aperture, the inner edge of the tympanic *bulla* being rolled in like a scroll. In the Seals and *Cetacea* the scroll-like form of the immensely thick tympanic bulla becomes still more marked, and the tympano-periotic fissure wider; but the latter becomes converted into a great gap in the floor of the tympanum in *Orycteropus* and in the *Sirenia*, where the tympanic is reduced to a mere thick hoop.

In many *Marsupialia* the alisphenoid dilates posteriorly and inferiorly into a funnel-shaped, thin-walled, bony chamber, which closes the tympanic cavity anteriorly, uniting by its edges with the tympanic bone. In certain *Insectivora*, such as the Hedgehog and Tenrec, the tympanic cavity is partly walled in by a process of the basisphenoid.

In *Hyrax*, and in many *Marsupialia* and Rodents, the jugal enters into the composition of the glenoid facet for the lower jaw. In the Marsupials the alisphenoid may also contribute towards the formation of this articular surface. In almost all Marsupials the angle of the mandible is continued inwards into a horizontal plate of bone. This "inflexion of the angle of the jaw" is peculiar to these mammals.

The palatine and pterygoid bones present very considerable differences in their connexions among *Mammalia*.

Thus, in the Ornithorhynchus, the larger *Myrmecophagæ* and in some *Cetacea*, the pterygoids unite in the middle line below, so as to prolong the bony palate beyond the palatines, as in the Crocodiles.

In the Marsupials, on the other hand, the bony palate, formed only by the maxillæ and palatines, is often defectively ossified, so that large open spaces are left therein on the dry skull.

CHEMICAL AIDS TO THE MEDICAL PRACTITIONER.

By ROBERT DUNDAS THOMSON, M.D.,
F.R.S.S. L. & E., etc.

No. VI.

BLOOD.

Importance of Identifying the Constituents of the Food in the Blood—Animal System has no Power to Produce Solids except by Degradation, but cannot Condense Gases—Analysis of the Proximate Constituents of the Blood—Coagulation of the Blood—Coagulation of Fibrin from Mixed Lymphatic Fluids—Composition of Pegmin, or Buffy Coat of the Blood—Pyropin an Analogue of Fibrin from the Elephant's Tooth—Blister Fluid—Determination of the Fibrin of Blood—Characters compared with Fibrin from other Sources—From Herrings and Oysters—Separation of Casein from the Blood—Oxidation of Casein, Tyrosine, Leucine—Lactarine a Valuable Gum—Estimation of the Albumen of Blood—Products of its Oxidation—Blood-Globules, how Estimated.

The older method of regarding the phenomena of the animal system was to study the ultimate constitution of the food, and the changes which it undergoes in relation to the destination of its elementary constituents. There was comparatively little effort made to trace out the changes through which the proximate constituents of the food pass. Even among more advanced chemico-physiologists such as Dr. Prout, although their attention was directed to the true type of food, the idea still lingered that elementary gases could be solidified to some extent by the animal mechanism; that nitrogen, even from the air, for example, might take part in the formation of the nitrogenous materials which enter into the structure of animals. "The origin of the azote in the albumen," says he ("Nature and Treatment of Stomach Diseases," 1840, p. 27), "is likewise at present unknown to us, though in all ordinary cases it seems to be appropriated from some external source." Again, in a note, p. 28:—"The azote may, in some instances, be derived from the air, or generated." So difficult is it to part with early impressions taught us. In a philosophical point of view, no doubt this mode of viewing the system is important, but, from its abstract nature, it alone is not calculated to give a practical application to our experiments. Again, with physiological writers who have dealt more with the pen than with the scalpel or crucible, we find sometimes amusing imaginative comparisons tending to lead us away from the truth. Thus it has been stated that the nitrogenous forms of albumen and fibrin bear to each other the same relation that cotton-wool does to the manufactured fabric,—that is, that albumen is the lowest form of nitrogenous principle in the animal system, the fact all the time being forgotten that the comparison of these objects should be reversed, since the highest form of organised matter in existence in the animal brain consists essentially of albumen. The most recent researches have shown that the animal system has no power to produce solids. It simply takes solids from plants, and uses them for its own purposes; modifies and transforms them into fluids, gases, and vapours, and in these forms discharges them from the body. The true practical method, then, of following the chemistry of the system, is first to study the food by making ourselves acquainted with the mode of demonstrating its composition, and then to trace it into the circulation, and apply our previously-acquired modes of analysis to the identification of the proximate constituents of the blood with those of the food.

(a) According to Cuvier, "L'os de la caisse ne paroit jamais bien se souder avec les os voisins et tombe aisement comme dans l'hérisson, le sarigue," etc.

Analysis of the Proximate Constituents of the Blood.—Blood differs from milk very distinctly in the presence of the red globules. When these globules are large, they may be separated, as in the frog, from the liquor sanguinis, or fluid in which they swim, by filtering the blood through paper. In human blood the blood globules are small, and pass through the pores of the filter, but if we throw a quantity of serum upon a filter, and drop fresh blood from a vein into the serum (one volume blood and eight volumes serum) we can often succeed in detaining the red globules on the filter while the liquor sanguinis and serum pass through, and we have this fluid coagulating into a clear gelatinous mass. This experiment often fails, but another method of performing it generally succeeds. Allow fresh blood from the arm to fall into eight times its volume of serum. The red globules fall to the bottom of the vessel, and the liquor sanguinis remains above, while the fibrin speedily separates from its solution. For these beautiful methods of experiment chemical physiology is indebted to Prof. Andrew Buchanan, M.D., of the University of Glasgow, who, amid the daily avocations of a laborious Profession, has found time during many years to contribute important facts to science, which have been too much neglected—(*Medical Gazette*, 1836, No. 28; *Proceedings of the Philosophical Society of Glasgow*, 1843, vol. i., p. 131). These experiments cannot fail to throw light upon the production of the buffy coat in many diseases. It is observed that the red globules have a natural tendency to such separation in weak liquor sanguinis, and this explanation has been applied to the production of the buffy coat of the blood in inflammation. But it would appear that this form of fibrin is peculiar, and contains more oxygen than exists in fibrin itself; and, many years ago, I examined this substance, and finding its composition distinct, gave it the name of *Pegmin* (from Πηγμα, coagulum). It has the following composition (*Phil. Mag.*, 1846, 28, 368; *Millon Annuaire*, 1847, 691):—

Carbon .	52·07
Hydrogen .	7·14
Nitrogen .	14·20
Oxygen .	26·79
Sulphur .	

It is analogous in constitution to another substance which I extracted from the elephant's tooth, in which it seems to exist as a kind of exudation from the blood. It possesses a fine ruby colour, and, under the microscope, presents remains of organisation. It possesses the following composition. I termed it *Pyropin* (from *Pyropus*, a ruby).

Carbon . .	53·33	53·50
Hydrogen .	7·52	7·66
Nitrogen. .	39·15	38·84
Oxygen . .		
Sulphur . .		

It differs from gelatin in being insoluble in water. (Liebig's "Geiger Handbuch der Chemie," 1843, I. Band: 1365.)

There is no doubt that the fibrin is actually dissolved in the liquor sanguinis while that fluid is circulating in the system, and that its separation and coagulation takes place after it is removed from the body. This is proved by Müller's experiment already referred to of filtering frog's blood. There is another fibrinous fluid, which can be easily obtained for experiment, and which appears to be identical with liquor sanguinis—the liquor of blisters. When withdrawn from the blister, this fluid is found to contain transparent vesicles or globules floating freely in the fluid. They are pretty uniform in size, are nucleolated, and resemble very closely the corpuscles of the blood. Now, the remarkable circumstance has been observed that, if the blister liquor be filtered and the corpuscles separated, the filtrate yields gradually a beautiful coagulum of fibrin. The fibrin coagulum, it is justly inferred, is not composed of these corpuscles, but must separate from the solution after filtration. Again, if we take the fluid of hydrocele, or the serum of blood, and allow them to stand separately, they never exhibit any appearance of coagulum; but if we filter them and then mix them, a beautiful coagulum very speedily appears (Buchanan); and this I have ascertained possesses all the chemical characters of fibrin. If we pass a piece of clot of blood reduced to the liquid state by kneading and expression through a linen cloth into the fluid of hydrocele, a coagulum ensues. A portion of white fibrin washed from the clot possesses a similar influence. The same result attends the introduction into hydrocele fluid of numerous solids—such as the muscular substance of beef, veal, and fish, skin and cellular membrane, spinal marrow, substance of the brain, nasal mucus, globules of purulent matter, etc. The coagulating power seems in these cases analogous to what have been described in chemistry as contact or catalytic actions. Corresponding with it, likewise, is the action of rennet in coagulating milk by the apparent influence of contact. As I have repeated these experiments upon a great scale, and ascertained the fibrinous nature of the coagulum in quantity, I would direct attention to the mode of demonstrating the presence of red corpuscles as distinct from the fibrin dissolved in the liquor sanguinis. The withdrawal, then, of the fibrin from the liquor sanguinis would, according to these experiments, be explained on the principle of the contact action of the blood corpuscles on the fibrin; and this view might be satisfactory were it not that it would afford no explanation of the coagulation which ensues when the filtered serum of blood and of hydrocele are mingled together. I suspect likewise that Dr. B. W. Richardson's very ingenious explanation of the cause of the coagulation of the blood by the loss of ammonia would fail to account for the appearance presented on mixing hydrocele fluid and serum. It is possible that in the latter case some of the corpuscles have passed through the filter, and may have acted as the centres from which the solidification of the fibrin in the fluid took place, and that, as bodies in motion have a tendency to communicate their momentum to bodies with which they come in contact, and thus produce decomposition, so, on the other hand, bodies at rest and solid of an analogous character may have a tendency to cause similar conditions on other substances. The power of charcoal to remove colouring matter and alkaloids, etc., from their solution is a familiar example of this nature. There is an interesting observation of Dr. John Davy, connected with this subject, that, whereas blood serum is coagulated by heat, and cows' milk is not affected by heat, yet, when sheep's serum coagulating at 170° was mixed with an equal volume of milk, the milk coagulated at 175° (*Physiological Researches*, 1863, p. 381); 3 milk and 1 serum coagulated at 190°, 5 milk and 1 serum coagulated by boiling in 15 minutes, 10 milk and 1 serum coagulated after 3 hours' boiling. It is by this communicated action that the effect of the albumen of eggs is exercised on milk in the preparation of many of our culinary dishes. It is by such experiments that we may hope to solve the nature of the transitions from one animal nitrogenous body into another. The chemical influence of organised matter is sometimes remarkable. Thus I have shown that ferric acid (FeO_3), which yields a fine pink tint to water when united with a base, speedily loses its colour when a plant of low organisation is immersed in it. This is well illustrated by using the *mother of vinegar*, or vinegar plant as it is termed (ulvina aceti). The same result occurs with weak solutions of permanganate of potash (*Proc. Phil. Soc. of Glasgow*, 1852, vol. iii., 238).

Determination of the Fibrin of Blood.—When we allow blood to stand, the blood-globules fall gradually to the bottom of the vessel in which the fluid is contained mixed with the coagulated fibrin which has thus separated from its solution. It is necessary, therefore, to prevent this deposition by mechanical means. If we allow about 1000 grains of fresh blood to pass into a porcelain basin, and keep agitating it by means of several glass rods tied together, or whip it with a bundle of osier twigs or with the fingers, we shall find that the blood-globules are retained in mechanical suspension, and the fibrin is separated in whitish masses. It is thrown on a piece of calico, and washed till it is thoroughly white. It is then transferred to a watch-glass, and dried in a water-bath at 212°, until it ceases to lose weight. When obtained in the hydrous state as a coagulum, it is yellowish, insoluble in water, alcohol, and ether. It differs from the fibrin of muscle in the action which it presents with some reagents. When placed in a dilute solution, but not saturated, of common salt at the temperature of the air, it gradually swells up, assumes a gelatinous appearance, and, in twenty-four hours, dissolves in the liquid, with the exception of a small portion of a mucus-like substance, which forms a thin stratum at the bottom of the fluid. When poured off, the solution is clear, and froths on agitation. When heated it becomes opaque, and deposits white coagula copiously at 130°, resembling coagulated albumen. This solution is not precipitated by corrosive sublimate, but neither is a solution of white of egg, to which a solution of common salt has been added. Solutions of chlorides of ammonium, calcium, nitrate of potash, sulphate of soda, potash tartrate of soda, and acetate of soda have a similar action. Solutions of iodide of potassium and subborate of soda dissolve the fibrin, but do not coagulate when heated. (Professor Harry Rainy, M.D., of Glasgow, 1835, in R. D. Thomson's "Records of General Science," vol. ii., p. 365.) When digested in water containing one-sixteenth of chlorohydric acid it swells in a short time into a gelatinous mass; on the addition of more acid it resumes its former volume. When more water is added it swells up like a sponge, but none seems to dissolve. Muscular fibrin, under the same circumstances, dissolves. On being neutralised, the solution coagulates into a thick, white gelatinous mass, which readily dissolves in an excess of alkali. The precipitate of the muscular fibrin by neutralisation is soluble in lime-water; this solution giving by boiling a coagulum resembling a dilute solution of albumen. If the solution be diluted in the water it proves to be insoluble in lime-water. The characters of muscular fibrin in different animals varies considerably. (Liebig, 1850, *Annalen der Chemie*, lxxiii., p. 125.) It follows from these facts, that fibrin differs materially in its properties, according to the source from which it is derived; that in general it yields to saline solutions, at the ordinary temperature, a substance resembling ordinary albumen; that the proportion of this substance yielded by fibrin varies materially; that it is greatest in the fibrin of human blood; that fibrin cannot dissolve in solutions of chloride of ammonium if heated above 130°; and that several kinds of fibrin are very slightly acted on by that solution at any temperature. Notwithstanding the differences in the physical characters of fibrin from different sources its ultimate composition is almost identical, although that of the blood approaches somewhat to that of albumen.

	Fibrin of blood.	Fibrin of muscles.	Fibrin of herring.	Fibrin of oysters.
Carbon .	53·90	54·46	53·77	53·67
Hydrogen.	6·99	7·28	7·44	7·00
Nitrogen .	15·58	15·84	16·23	16·89
Oxygen .	21·83	19·81		
Sulphur .	1·50	1·21	22·56	22·44
Ash . .	·28	1·40		
	Liebig.		R. D. T.	

One of the most convenient modes of procuring a pure white fibrin is to purify it by extraction from fish. The fish is first carefully washed with cold water to remove albumen. It is then heated with dilute chlorohydric acid to remove as much as possible of the insoluble salts. It is then boiled repeatedly in alcohol and ether to separate fatty matter and oil (R. D. T., 1846, *Philosophical Magazine*, 3d., 28, 368; *Millon Annuaire de Chemie*, 1847, 691). Its distinguishing character from albumen is that when fibrin is oxidised by means of bichromate of potash and sulphuric acid the products are butyric acid, butyric aldehyde, acetic acid, aldehyde, oil of bitter almonds, metacetonic aldehyde, benzoic acid, and prussic acid, while albumen yields a much larger quantity of acetic acid. The mean amount of fibrin in healthy blood is about 3 per 1000.

Separation of Casein from the Blood.—The amount of this nitrogenous constituent varies in different specimens, and is supposed to depend upon the quantity of white globules present in blood; but this has not been ascertained with any degree of certainty. It is obtained by boiling the clot with weak alcohol and allowing it to cool. The casein separates in flocks on standing. It is to be purified with great care by means of concentrated alcohol, by ether, and by water. When dried at 300° in vacuo it yields the following ultimate results:—

	From blood.	From milk.
Carbon . . .	53·75	53·70
Hydrogen . . .	7·09	7·20
Nitrogen . . .	15·87	16·60
Sulphur . . .	23·29	·90
Oxygen . . .		21·00
	100·00	100·00

Casein is distinguished from fibrin by its being soluble in water and boiling alcohol. From its aqueous solution it does not separate or coagulate by boiling, but on the addition of acetic acid it falls in flocks, which are not combined with the acid. In excess of acetic acid it is somewhat soluble. Casein may be further purified by solution in carbonate of soda, and precipitation by acetic acid. It is soluble by prolonged digestion in dilute chlorohydric acid. When oxidised by bichromate of potash and sulphuric acid, it yields more acetic acid than fibrin, likewise more oil of bitter almonds and benzoic acid, but less valerianic and butyric acid; besides, it yields aldehyde, formic acid, matecetonic aldehyde, butyric aldehyde. When we fuse casein in a silver basin with solid caustic potash, we obtain, by means of water and acetic acid, *tyrosine* ($C_{18}NH_{11}O_6$), in fine needles; the mother liquor affording, after its deposition, another body — *leucine* ($C_{12}NH_{13}O_4$), a crystalline body in scales, which is volatile at 338°, and can also be obtained from gelatine. When dry casein is digested with caustic ammonia, it yields a valuable gummy substance, which has been first observed by my pupil, Mr. R. T. Pattison, and introduced into calico printing under the name of *lactarin*, for fixing ultramarine and other mechanical colours.

Estimation of the Albumen of Blood.—The serum of blood is to be carefully poured off from the clot, weighed, and evaporated to dryness, and again weighed. The clot is also weighed and evaporated to dryness and again weighed. The albumen in the serum is boiled with alcohol to remove fatty substances and extracts, and the residue calcined. The weight of the fats, etc., and saline matter, is then subtracted from the original weight of the serum residue. The water evaporated from the clot is to be considered as serum, and the amount of albumen present in it calculated from the composition found for the serum. Albumen differs from the preceding nitrogenous principles in being coagulable by heat, and in being precipitated by the addition of a mixture of acetic acid and ferrocyanide of potassium. To prepare albumen for ultimate analysis, it is precipitated by alcohol from serum, and washed with alcohol and water. It is then dried, and treated with alcohol and ether, to remove fat and extract. It is then dried in vacuo at about 300°. It yields:—

	From Blood.	From Eggs.
Carbon . .	53·54	53·14
Hydrogen . .	7·08	7·10
Nitrogen . .	15·82	15·77
Sulphur	23·56	1·70
Oxygen		22·29
	100·00	100·00

When oxidised with binoxide of manganese and sulphuric acid albumen yields hydrides of acetyle, propionyle, butyryle and benzoile, formic, acetic, butyric, valerianic, benzoic, and probably also propionic and caproic acids. When bichromate of potash is substituted for the binoxide of manganese, cyanohydric and valero-nitrile, a heavy oil with the smell of canella and most of the above substances are obtained.

Determination of the Blood Globules.—After the separation of the fibrin in the first experiment the blood is evaporated to dryness, and heated to 300°. The residue consists of the serum and blood globules. On substituting the serum (as ascertained under albumen) and the salts, the remainder is the blood globules. It will be observed that the latter determinations are by no means direct, and there still remains to be found a more satisfactory method of analysis. The blood globules consist of colouring matter, globulin and sesquioxide of iron, but no means have been fallen upon of directly ascertaining the amount of globulin.

ORIGINAL COMMUNICATIONS.

CASE OF INTRA-OCULAR ENCEPHALOMA EXTIRPATED WITHOUT RETURN.

By ROBERT B. CARTER, M.R.C.S.E.

Walter M., aged 4 years, residing at Chatham, was brought to the Kent County Ophthalmic Hospital on January 8, 1863. At that time I was in temporary charge of the Hospital for Mr. Woolcott.

The patient was a ruddy, well-grown, healthy-looking boy, with dark hair and dark brown irides. His mother stated that she had quite recently noticed that his left eye "looked strange," and on further examination found that he could not see with it. She took him to the Military Hospital at Chatham, where the disease was pronounced to be cataract, and the mother was told to bring him again in the summer to undergo a needle operation. Not feeling quite satisfied, she brought him to Maidstone.

I found the tension of the globe greatly increased, the sensitiveness of the cornea diminished, the pupil somewhat dilated and fixed, the iris apparently in contact with the cornea, and the lens brilliantly transparent.

Behind the lens the pupillary space was entirely filled by an irregular nodulated mass, of a primrose yellow colour and uniform appearance. The limits of this mass could not be seen in any direction by any kind of ophthalmoscopic or focal illumination, and no trace of the retina or choroid, or of their vessels, was perceptible. There was no pain or uneasiness, and no perception of light. The other eye was perfectly healthy.

Upon a review of the whole case, I was inclined to think the disease tubercular. I felt it right, however, strongly to urge the immediate removal of the globe, as affording the only hope of cure in the event of malignancy.

The child was brought to the Hospital for admission on January 10. The condition was unaltered, except that the lens had somewhat lost its brilliancy. Dr. Monckton, of Maidstone, who saw the case with me, concurred in thinking the growth possibly malignant, but most probably tubercular. I removed the globe on the same day in the usual manner; and, as I was leaving Maidstone immediately, placed it in Dr. Monckton's hands for examination. I was only able to observe that the optic nerve looked healthy at the point of division.

A few days later I received the following report from Dr. Monckton:—

"Sclerotic, cornea, and aqueous humour perfectly healthy. Lens transparent, and not displaced. The anterior and upper half of vitreous not much changed, but rather more diffluent than normal. The retina not to be found as a nervous tunic, but constituting, in a degenerated form, the posterior half of a tumour three-fourths the size of a hazel nut, the whole being easily separable from the choroid, which was expanded, almost unchanged, behind. On tracing the optic nerve forwards after it had pierced the sclerotic, it was found to lose itself in the degenerated mass of nerve substance above described, which again became merged in the true matter of the tumour in front of it, which occupied the lower and posterior half of the vitreous. It was tolerably plain, therefore, that the diseased action had commenced in the retinal tissues, which had been slowly disorganised, while the new growth was advancing from them, as a base, into the vitreous chamber. The new growth itself was a little puzzling. The first glance at it under the microscope seemed conclusive as to its encephaloid character, but, in seeking fresh portions, several distinct gritty calcareous particles were found, visible to the naked eye, and appreciable by the finger, which strongly suggested tubercle. I submitted a piece to Dr. George Johnson, of King's College, and he decides in favour of encephaloma, in which, he says, calcareous particles are not so uncommon as I had supposed. The development must have been rapid, for the cells were very numerous and small, having hardly passed beyond the nuclear condition."

I did not myself see the patient again after the operation, but he has been kept under observation at my request. The wound healed well, and I heard on July 15 that there had been no re-appearance of the disease either in the orbit or elsewhere. Since then, up to November 26, he has not been brought to the Hospital, although his parents promised that he should be if there were any appearance that excited their suspicions. In so young a child I think ten months is a sufficient time to wait before pronouncing that the operation was probably successful.

My own opportunities of observation have tended very much to encourage the belief that many forms of cancer are primarily local, and that they cause contamination of the blood, instead of arising from it. However this may be, the history I have recorded is sufficient to show that, in any doubtful case, and especially in a circumscribed organ like the eye, it is the duty of the Surgeon to perform early extirpation, without waiting for certain evidence of malignancy. In the present instance it is scarcely possible to doubt that the patient's life would have been sacrificed by delay, and I think it a matter for great congratulation that the fact of chief importance, the character of the morbid growth, rests upon the testimony of two independent and highly skilled observers.

Stroud, Gloucestershire.

ON INFANTILE PARALYSIS.

By CARL HEINE, M.D.

(Concluded from page 558.)

I have given in the preceding half of this paper the sketch of the disease as it appeared in two hundred cases, and in many others which my father saw only in consultation, stereotypically the same, showing only differences in degrees.

It remains now to reply to the question Mr. Badham addressed to the Profession twenty-seven years ago, viz., "What is the cause of this paralysis ? Where is its origin ?" These questions are still waiting for decision. These years, however, did not pass without discussion of the question. An eager discussion arose as to their solution, but the only infallible way to arrive at the truth,—the way which we have to open with the anatomical scalpel through a long series of post-mortem examinations,—this way is still shut up to us. To open this way, to collect the results of dissections which show us the exact condition of the disease in fresh cases, or the undoubted residues of the primary derangement at later periods, so as to afford clear evidence on the dead body, was the aim of my father's continued endeavour, and the subject of repeated inquiries in Medical journals; but until he published the second edition of his book, he had only succeeded in finding three valuable post-mortem examinations. It was but in the last few months that a fourth post-mortem examination yielded unmistakable proofs of how rare these observations still are, and how much is left for us to do. Fortunately, even before this pathological evidence is obtained, the symptoms of the disease during life in their connection enable us to deduce conclusions regarding its probable origin,—conclusions which are founded partly upon the analogy with similar paralyses of adults, well known in their post-mortem phenomena, partly by exclusion of anatomical alterations found in other infantile paralyses, the appearances of which during life are in open contrast with those of the form here described.

Above all, we have to bear in mind that all the cases of the disease I am describing, the serious and the light, the paralyses of both lower extremities, as well as the partial paralyses, are united by the same principal characters, and that therefore no separation can be allowed as to their origin; that, on the contrary, a common and uniform lesion, only varying in degrees, must be assumed equally for all. But in which organ is the seat of the lesion ? The few who still believe that a primary atrophy of the muscles is the cause of the paralysis may be passed over, as they do not appear to know how the paralysis begins, nor how it progresses. They maintain that a slow beginning and a progressive extension of the lesion is the rule in these cases, and therefore compare them with the progressive muscular atrophies of adults; here again I have only to say, that as the paralysis, after its acute onset, very often retires from a larger to a smaller territory, I might rather propose to call it in certain limits a regressive than a progressive paralysis. After this the general belief must be that the affection cannot possibly be due to other than to lesion of the nervous system. But here arises a great difference of opinions. In which of its elements, and in which way has the nervous system been affected? Is the seat of the disease in the nervous centres or in the peripheral nerves, and if the latter is to be presumed, is then the disturbance merely a functional one, or does it depend upon an actual alteration of their structure? It can aforehand hardly be supposed that such a destructive disease, suddenly arising with fever, convulsions, and undoubted irritation of the nervous centres, should consist in a simple morbid process in the course of a peripheral nerve, or even only in a disorder of its functions, independently of any organic alteration.

How could we conceive that such a sudden disability of function, the cause of which we should still have to reveal, should endure for a whole life, and be obstinate enough to defy the restoring power of Nature, as well as of Medical remedies. Certainly it would be a fact without its equal in pathology. On the other hand, let us for a moment admit that an organic lesion of a peripheral nerve takes place; then we should have to assume in those cases where one whole limb or both are paralysed, either an extension of the pathological process over the whole length of the principal nerves of these extremities, or its constant localisation near their origin from the marrow. Of what nature could such a lesion be? What phenomena referable to these nervous branches would support such an assumption? Have we any pains, or swelling, or similar appearances in their course through the extremities, or have any products of inflammation or degeneration been discovered in their trunks or sheaths? Neither one nor the other. But to refer to still more striking objections. How should we explain, as mentioned above, the escape of the sensitive fibres in a peripheral nerve from the severe affection by which the motor nerves have been struck, the former being throughout so closely intermixed with the latter. These and more obstacles arise against this most favoured and propagated interpretation of Rilliet, who is the promotor of it, and whose name, "Essential Paralysis," means nothing else than an absence of all organic lesion. He himself felt the gravity of such objections so much that he readily admitted an exception for paraplegic and hemiplegic cases, conceding that here an affection of the spinal cord or the brain might be suspected, and separating them by this concession arbitrarily from those lighter paralyses of single sets of muscles upon which his theory appears exclusively to rely. I need scarcely repeat, after what I have said before, that there may exist, and really do exist, local paralyses in childhood which may be called essential paralyses, produced by a *coup de vent*, or other cause (in one case I recollect very well, by worms), lasting only for a short time, and being cured by appropriate remedies; but such cases should not be mixed with cases of infantile paralysis proper, which by such proceedings would entirely lose its peculiar characters. When, therefore, the paralysis is to be considered as one of central origin, the second question is,—Is it due to a lesion of the brain, or of the spinal cord? The examination of this question leads us to a short contemplation of another less frequent form of infantile paralysis, which we have already repeatedly mentioned here.

Nearly in the same period of life, but not confined in such narrow limits, this paralysis appears likewise by a sudden attack. But the children seized by it are for the most part in weak health, of delicate constitution, born of hysteric mothers, or descending from nervous parents. Soon after birth they begin to suffer periodically from slight convulsions; suddenly the real and vehement onset, which is followed by the paralysis, occurs. It is accompanied by well-marked cerebral symptoms, sudden cries, constant rolling of the globes, and convulsive contractions of the muscles. These symptoms of irritation of the brain do not disappear when the attack comes to its end, and they leave permanent effects, which denote the existence of a material alteration in the brain. And these children, examined at later periods, have generally a silly expression, very often an imperfect capacity for speaking, or at least an inarticulate pronunciation, owing to a spasmodic condition of the muscles. They stutter and frequently squint. Sight and hearing are weaker on one side than on the other, or they suffer from constant, and often unilateral headaches, or humming in one ear. The most important difference of this paralysis from the other is, however, that it strikes in the great majority of cases one whole side of the body. The arm and leg of the same side are here commonly found paralysed together, as in hemiplegia of adults, hemiplegia, in that proper meaning of the word in which it is generally understood. This phenomenon would within a certain extent be by itself sufficient to distinguish both affections, as, I repeat it, no one of the cases of the kind I describe in this paper ever shows such a disposition. The cases in which both lower limbs are affected from cerebral disease, show in a prevailing number the same paralytic affection in the upper extremities; in every way their nature is fully characterised by the accordance of all other essential features with those of cases of cerebral origin. Another phenomenon very important for the diagnosis is the spasm, and the convulsive condition of the muscles. Contemporaneous with the paralysis, as an immediate consequence of the onset, this spasmodic retraction of muscles will set in; accordingly the deformities are here really of primary, and not, as in the first cases, of secondary occurrence. Most commonly the gastrocnemii appear to be in this way contracted, assuming the form of a spasmodic talipes equinus. Other deformities, like retractions of the flexors of the leg and the adductors of the thigh, will also be found. In no one of these cases is the foot dragged into the position of a club-foot, a deformity my father never saw combined with spasm. The retracted muscles, when they are extended by force, give way successively, showing a convulsive resistance, and return abruptly to their shortened state as soon as they are left to themselves. When tenotomy is performed, both ends spring so far one from the other, as they never do in any other paralytic or congenital deformity, sometimes to a distance of more than two fingers' breadth. (The state of muscles in this respect in paralytic deformities is considered by my father to be of such importance that he proposed to divide all these deformities into two large groups, viz., spasmodic and non-spasmodic, or, as they may be called, atrophic forms; the first due to a cerebral, the second to a spinal cause.) The temperature in the cerebral paralysis is scarcely below its natural height. The electro-muscular examination shows, as mentioned, an extremely sensitive reaction, even more than in healthy muscles, and causes very severe pain. The intellect of the children when they grow up remains feeble, a great irritability is apparent in their whole behaviour; they are easily frightened, and then suddenly and involuntarily emit water, being in general obliged to yield more than usual to this necessity. The result of post-mortem examinations—some, but not many, having been made in such cases—confirms fully our interpretation of the appearances in life. In recent as well as in old cases products of inflammatory, hæmorrhagic or serous effusions, or similar lesions destroying the normal structure of the organ, have been discovered in one hemisphere of the brain, or in the meninges, so that we may appear quite justified in terming this class of cases "cerebral infantile paralysis."

Let us now for a moment take a parallel view of both kinds of paralyses; let us compare the disturbance in the intellectual faculties and organs of special sense, in one, and their perfect escape in the other, recollecting that in those cases one whole side of the body is commonly paralysed, which so to say divides it in its longitudinal diameter, and that in the others it is usually confined to the lower half of the body, dividing it across. Let us consider, too, the spasmodic disposition of the muscles in the first, and their extreme laxity in the other, the slight influence of the disease upon nutrition and temperature, with the increased muscular electricity in the first, and the unusual atrophy and decrease of temperature associated with the entire loss of galvanic irritability in the second. Let us at the same time remember that in the first cases the evidence of a cerebral lesion has been given by post-mortem examination, we shall then be compelled to come to the conclusion, that for the form of infantile paralysis—the subject of my paper—another explanation for its phenomena, another starting-point is to be found, and I may say that almost by exclusion we are directed to the other nervous centre, the spinal cord. The intimate connexion of the cases I am describing with this organ seems to me to be the more undeniable as their repeatedly enumerated symptoms in more than one point agree with palsies of adults, the cause of which has been undoubtedly proved to be seated in the cord. We are confirmed in our assumption by a physiological experiment, showing that section of the spinal cord produces quite the same loss of muscular power in all sets of muscles receiving their nerves from the lower segment, with the same characteristic decrease of temperature, the same atrophy and abolition of electric irritability, phenomena which seem to belong more especially to lesions of the spinal centre. Experience teaches us, besides, to consider paralysis of both lower extremities as an affection most likely due to a disease of the cord, and consequently the predilection of this kind of paralysis for the paraplegic form (especially when we judge from its onset), gains an indicative and deciding importance for the hemiplegic and partial forms. The fact that the lower limbs usually suffer, together with the frequent re-establishment of motor power in higher regions at first paralysed, might find, if it is allowed to go a step further, a very obvious explanation in the assumption of an inflammatory exudation in the spinal canal, which, sinking after a while to lower parts, keeps at last these alone subjected to the pernicious influence of pressure and consequent atrophy.

Such were the reasons, as far as they can be derived from the symptoms in life, which induced my father to declare this most common kind of infantile paralysis to be of spinal origin, and to submit it, under the new term of "Paralysis Infantilis Spinalis," to the consideration and judgment of the Profession, trusting, besides, that this name will be a new warranty against any future confusion of these cases with other forms of paralysis in infancy. The mentioned reasons, I confess, might not be regarded as strong enough without any other support, but they obtain very nearly the required strength of proof by three post-mortem examinations made in cases of infantile paralysis indisputably belonging to the class I have described, and which, in their affirmative results, appear as highly valuable support, if not as determining testimony for my father's opinion.

In the first of these cases, an adult who had suffered from infancy from paraplegia with most marked symptoms, but who had not been examined before a later period of life (by Hutin), an atrophy of the cord was discovered, increasing from the eighth pair of dorsal nerves downwards, and reducing the circumference of the cord to that of a common pen. The atrophy extended, besides, over the limits of the peripheral nerves. In the second case, one of paralysis of the whole of one leg, examined by Longet, the atrophy and morbid change of colour were principally confined to the anterior roots of the lumbar and sacral nerves of the right side. In the third case, also a case of hemiplegia, published by Berend, and examined a few years after the appearance of the affection, the remnants of a former meningitis were found in an old, solid, and gelatinous pseudo membrane, lining the whole arachnoid of the cord, so that the latter was strongly constricted, and started out when the membrane was cut into. The membranous exudation spread over the roots of the nerve trunks of the paralysed limb, and reached the cauda equina. Besides that, a fresh arachnitis on the posterior surface of the cord, extending to the bottom of the fourth ventricle, was to be seen, evidently the real cause of death.

To these three post-mortem examinations of older date, I am able to add a fourth, and a more recent one, which has been made in Berlin by Dr. Recklinghausen (assistant to Virchow), and which may be found in the report of a sitting of the Berlin Medical Society, in the *Deutsche Klinik*, of January 31, 1863. The case was that of a child four years of age, with paralysis of both lower limbs, the knees and feet showing the severest deformities. The dissection, completed by the most careful microscopical examination, showed the existence of tubercles in the cord. It was most interesting that at the same meeting two cases of cerebral infantile paralysis were reported by Langenbeck, in which he had had the opportunity of making the post-mortem examination. In both the individuals died at adult age, but the affection dated from infancy. One was a man of 45 years, weak of mind, with his whole left side paralysed, the arm, however, more completely than the leg. The other case was that of a girl of twenty-three years of age, with paralysis, chiefly of the radial nerve of the left arm, and spasmodic contractions of the fingers. In both cases the cause was discovered in an old softened condition of the right hemisphere of the brain.

The above four observations are, being so few in number, not conclusive. They differ in the exact character of disease of the cord, but all agree in the fact that the cord was diseased.

The fact alone that this organ has been found affected in those cases which were plainly marked with the characters of infantile paralysis such as I have described has a claim to full acknowledgment, especially as these are the only recorded careful examinations that I can find of the nervous centres in such cases. If other post-mortem examinations of supposed cases of the same kind should be opposed to them—in which no anatomical alteration could be discovered—this negative result being regarded as a positive confirmation of the "essentiality" of the disease, then I confidently reply, that in those cases, so far as I know, the microscopical examination of the spinal cord has been omitted, and the importance of that expedient is brought to light by the fourth case, in which by it alone the seat of the affection was discovered. In other cases the autopsy may perhaps have been performed at so early a time, that the more striking changes of secondary occurrence—chiefly an atrophy of the cord—might not have been extensive enough to be recognised. The discussion should by no means be yet closed; the scope is still far from being reached, since it is our task "quam plurimas dissectionum historias habere et inter se comparare." But this advantage may be gained by the view adopted by my father, viz., that the disease is of spinal origin; that a ground of discussion is now indicated on which others may support or deny, whilst the *à priori* assumption of a merely essential nature of the paralysis exempts too readily from this trouble.

It remains for me at the end of this paper to say a few words about the therapeutics of the affection, in so far as this accords with the purpose of this article. I mean the treatment of the paralysis when established, and not the means to prevent—if it be ever possible—its accomplishment in the attack, since the latter will not differ from the usual and well-known treatment in fevers and convulsions due to irritation of the nervous centres.

The treatment of the secondary phenomena is to attempt to reduce the paralysis to its slightest possible extent, and to assist Nature in this endeavour. This will be done best when all acute symptoms have disappeared, by the early application of galvanism, by tonic and nervine remedies, by systematic performance of passive movements, embrocations, baths strengthening the constitution (shower-baths where it is deemed useful), etc., in order to obtain the greatest possible improvement of motor power in the paralysed muscles, and to prevent their increasing atrophy. But, unfortunately, in no case which really belongs to this affection perfect restoration of the lost power of movement can be gained. The deformities are to be cured according to orthopædic principles, by tenotomy and mechanical apparatus. After being reduced to their normal form and conditions, the paralysed limbs want strong steel apparatus to become artificially enabled to support the weight of the trunk, and to perform their functions as motor organs; lighter cases, of course, require them made on simpler principles.

Cannstatt, Würtemberg.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

SAMARITAN HOSPITAL.

EIGHT CASES OF OVARIOTOMY.

(Under the care of Mr. SPENCER WELLS.)
[From notes by Mr. E. PARSON, House-Surgeon.]
(Continued from page 562.)

Case 5.—Ovarian Tumour and Ascites—Ovariotomy—Recovery.

A MARRIED woman, 35 years of age, was sent to Mr. Wells by Dr. Jackson, of Scarborough, and was first admitted in July last, having a very large multilocular ovarian cyst, which had been tapped five times within the preceding seventeen months, about three gallons of fluid escaping at each operation. She had one child, two years old, and the swelling had been discovered about two months after her confinement. The catamenia had been absent since November, 1862. As the weather was very hot in August, and the wards were about to be cleansed, Mr. Wells tapped her on the 10th, removed twenty-two pints of mucoid fluid, and she went to the suburbs. She was re-admitted on the 3rd of October, very much oppressed by distension of the abdomen, and troubled a good deal by cough, but otherwise in fair condition. The measurements on the 6th were, girth at umbilical level, forty-seven and a-half inches; sternum to pubes, twenty-five inches; from one anterior superior spine of ilium to the opposite, thirty-one inches. A wave of ascitic fluid was noticed as well as the deeper fluctuation of the ovarian cyst. The uterus was low, freely movable, the os and cervix normal, and there was some prolapse of the posterior wall of the vagina, ascribed to the presence of ascitic fluid in Douglas's space. The liver was pushed upwards, pressing upon the right lung, and there was also some fluid in the right pleural cavity. The dulness extended as high as the third rib. The urine was scanty and concentrated, otherwise normal.

Ovariotomy was performed on the 8th of October. Dr. Gusserow, of Berlin, Mr. Harrison, etc., were present. Mr. Parson gave chloroform. An incision was made, seven inches long from the umbilicus downwards. There was a free escape of ascitic fluid as soon as the peritoneum was opened, and a cyst was exposed with walls so very thin that they gave way directly a puncture was made, and the trochar became useless. The cyst protruded as it was emptied, and Mr. Wells passing his hand within it, broke up several groups of cysts in the interior, and after separating a large piece of adhering omentum from the outside, the whole tumour was withdrawn, a long slender pedicle secured by a clamp, and the tumour cut away. All the torn and congested shreds of separated omentum were then cut off, and five vessels which bled freely were tied with fine silk, the ends of the ligatures being cut off short and returned with the omentum. A great deal of mixed ovarian and ascitic fluid was then carefully sponged from the abdominal cavity, and the wound was closed by five deep and three superficial silk sutures, the stump of the pedicle being fixed by the clamp outside the lower angle of the wound.

Very little need be said of the progress after operation, as it was chiefly remarkable for the absence of pain, vomiting, or other abdominal symptoms, although a troublesome cough and viscid expectoration were annoying on the third and fourth day. The sutures and clamp were both removed on the fourth day after operation. A slight prolapse of the pedicle, and neuralgic pains in the right hip and leg, with some irritation of the bladder, followed. This continued till the ninth day, when there was rather a free discharge of fetid pus from the side of the pedicle, and an eruption of urticaria. Afterwards she improved daily. The prominent pedicle sank to the level of the skin; cicatrisation followed. She left the Hospital in good health on the 4th of November, and has been heard of since her return to Yorkshire as being extremely well.

Case 6.—Ovariotomy—Very Firm Adhesions—Recovery.

An unmarried house-servant, 23 years of age, was sent to Mr. Wells last August by Mr. Johnson, of Croydon, having a large ovarian tumour, which had been tapped twice, the first time in September, 1862, and the second in July, 1863, each time between two and three pailfuls of fluid having been evacuated. She filled slowly after the first tapping, very rapidly after the second. It was arranged that she should be admitted early in October, and this was done. The catamenia commenced on the 16th and ceased on the 20th. On the 25th the girth at umbilicus was forty-two and a-half inches, and the distance from sternum to pubes twenty-two inches. She said she was then not nearly so large as before the last tapping.

Ovariotomy was performed on October 26. Mr. Parson gave chloroform. Dr. Hitzig, of Berlin; Mr. Brooke; Dr. Bullen, of Cork; Drs. Johnstone and Hilditch, of Greenwich Hospital, were present. A small incision was first made, but it was afterwards enlarged until it extended from three inches above the umbilicus to five inches below it. Considerable difficulty was experienced in separating some very intimate and unusually firm adhesions, which extended all over the abdominal wall anteriorly, but as there were no posterior nor pelvic attachments, and only a small piece of omentum loosely adhering, there was no difficulty experienced after the adhesions had been broken down. Owing to the closeness of those adhesions the cyst was opened during the efforts to expose and isolate it, and it was emptied while the peritoneal cavity was still unopened. There was scarcely any hæmorrhage. A small pedicle was secured by a clamp, and kept outside without much traction. The wound was closed by five deep and several superficial sutures of fine silk.

She passed a comfortable night after two opiate enemas, and went on remarkably well, not vomiting once. All the stitches were removed on the third day. On the fourth day she began to suffer from pain in the course of the right sciatic nerve, and as the clamp was depressed, Mr. Wells removed it on the fifth day. The neuralgic pain ceased very soon after the removal of the clamp. On the seventh day the bowels were relieved after a warm water enema. After this she gradually regained strength, was sitting up three weeks after operation, and left the Hospital in very good health on November 21.

Case 7.—Ovariotomy—Death on the Eighth Day from Septicæmia.

An unmarried cotton weaver, from the neighbourhood of Preston, was admitted on October 26, the whole abdomen being occupied by a multilocular ovarian tumour, which had only been discovered about five months before, although increase in size had been noticed for about three years. About eight months ago she had suffered severely from peritonitis, or cyst inflammation, and recently the left leg had become hard, and was very much swollen. There was a free exudation of serum from an abraded surface above the ankle.

Ovariotomy was performed on November 2. Drs. Johnstone and Hilditch, of Greenwich Hospital, were among the visitors. Mr. Parson gave chloroform. The cyst was exposed by an incision, four inches long, extending downwards from one inch below the umbilicus. Extensive adhesions over the front and sides of the tumour yielded easily to the hand. One or two cysts gave way during this process of exposure and separation, but Dr. Savage kept the abdominal wall so closely pressed against the cysts that all the fluid passed outwards, so that when a sponge was afterwards passed into the pelvic cavity it came out quite clean. It was necessary to tie a superficial varicose vein, which was divided in the first incision. A small pedicle was secured by a clamp between two and three inches from the right side of the uterus. The left ovary was healthy, but a portion of the left Fallopian tube and broad ligament adhered to the tumour. They were easily separated, and the wound was closed as usual.

She recovered well, and normal reaction came on with but little pain and no sickness. She passed a comfortable night after two small opiates; but the next morning, although she seemed to be going on perfectly well, Mr. Wells noticed a very peculiar, faint, sweetish, or earthy odour in the breath, and an irregularity in the rhythm of the pulse, with two or three intermissions in the minute. The rate was only from 88 to 96 all day; perspiration was free, and the urine highly concentrated.

Second Day after Operation.—Pulse 96 all day, but still irregular, with an occasional intermission. Neither pain nor vomiting; free perspiration; urine scanty, and very heavily loaded with lithates. Stitches removed forty-eight hours after operation; wound healed.

Third Day.—No change all day; seems very comfortable and cheerful, but the irregularity of pulse is constant.

Fourth Day.—At twelve last night, being rather restless, ten drops of laudanum were given. At 3 a.m. this was repeated. She felt sick, and at 6 a.m. vomited some greenish fluid. At 10 a.m. pulse 100, still irregular; some tympanites. At 2 in the afternoon, as she had vomited again, as the tympanites was increasing, and the clamp becoming depressed, it was removed, after cutting away all the slough above it. The slough sank between the lips of the wound, but seemed to be firmly attached there. At 5 she felt easier, but at 10 the pulse was up to 130; she had vomited again, and was thirsty. The slough had sunk quite out of sight, and there was some dark serous discharge on the bandage.

Fifth Day.—10 a.m.; pulse 120; more regular; no intermissions; hot linseed poultices applied over the lower part of the wound (the only part not united). Some red serum observed on each poultice, but none appears at the opening. On passing in the end of the little finger no slough could be felt, and there was no fœtid odour on the finger. The aspect was rather jaundiced; the urine very high-coloured; specific gravity 1032, loaded with albumen, and depositing tube casts, some renal, and a good deal of vesical epithelium, with some blood disks, and a large proportion of highly-coloured urates. At 2 p.m. the pulse was 140; she complained of the heat, and the vagina was very hot. The windows were kept open, and the hyposulphite of soda was given every two hours, in consequence of the success which had followed its use in typhus in Italy, and its known power of checking the fermentative or putrefactive process.

Sixth Day.—Seemed better after the first four doses of hyposulphite, but the fifth and sixth caused vomiting, and it was not repeated. Half an ounce of a saturated solution had been given, further diluted at each dose. Pulse 120, two or three intermissions in the minute. Urine still albuminous and coloured with bile, less loaded with lithates, and containing no blood. Feeling and looking better. Less tympanites. Skin warm and moist. Tongue moist. The dose of hyposulphite was reduced to a drachm of the saturated solution every two hours, and afterwards to half a drachm; but as even this seemed to make her sick it was omitted. She had a small dark motion in the evening, and a slight uterine epistaxis came on. She took lime water and milk without sickness.

Seventh Day.—Has had a restless night. Pulse 140. Aspect more depressed. Mulberry petechiæ on chest and buttocks. Urine still albuminous, but clearer and more abundant. Rectum and vagina very hot. A most careful examination could detect no evidence of pus in the pelvis or cellular tissue. She continued getting weaker all day, and frequently vomited darkish viscid fluid exactly like the "black vomit" of yellow fever. The pulse rose to 150 and 160, became very feeble, and the respiration laboured, although the mind was quite clear.

Eighth Day.—She died at 5 a.m., having vomited frequently during the night large quantities of the "black stuff," and having passed just before death a very copious fetid "death motion." The body decomposed very rapidly; indeed, decomposition may be said to have begun before death.

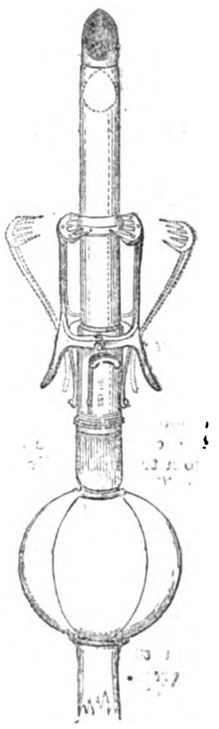
It is much to be regretted that the body was not examined, but a promise had been made to the patient before the operation that in case of her death her body should not be examined, and the promise was kept.

Case 8.—*Ovariotomy—Pedicle left within the Abdomen—Recovery.*

An unmarried lady's-maid, 32 years of age, was sent by Mr. Stowers, of Kennington, to Mr. Wells, and was examined by him on October 15, 1863. He made the diagnosis of ovarian cyst on the right side, nearly unilocular, unattached to the parietes, and arranged that she should come into Hospital for ovariotomy early in November, soon after the cessation of an expected menstrual period. The cyst had only recently been discovered by Mr. Stowers, but she had been getting larger for the last year. She was admitted on November 12, when the previous diagnosis was confirmed, and some attachments to the bladder were suspected, as a hard portion of the tumour could be felt between the bladder and uterus (apparently fixed there), depressing the anterior wall of the vagina.

Ovariotomy was performed on November 16. Messrs. Fowler and Stowers, of Kennington, Dr. E. Day, etc., were present. Mr. Parson gave chloroform. A non-adherent cyst was exposed by an incision four inches long, midway between umbilicus and pubes, tapped, emptied of seventeen pints of fluid, and gradually withdrawn, while the abdominal walls were kept closely pressed against the cyst by Dr. Savage. Not a drop of blood or ovarian fluid passed into the peritoneal cavity. The left ovary was felt to be healthy. The cyst was so closely connected at its neck with the right side of the uterus, that it would have been impossible to keep a clamp outside the abdomen without a severe strain on the uterus. Mr. Wells therefore tried the plan of transfixing the broad ligament and tying it in two portions, cutting away the cyst close to the ligatures, cutting off the ends of ligature short, returning the tied stump with the knots and loops of the ligatures into the abdomen, and closing the wound completely. He was able to do this, after the separation of a few cellular attachments, without including either the Fallopian tube or the round ligament in the ligatures.

The patient very soon rallied, and went on remarkably well, but it was curious that she complained even more than usual of the dragging pain in the back and hip, and the pain down the thigh, generally attributed to the pull of the clamp on the pedicle. There was also rather more abdominal pain than usual, rather more tympanites, and a more rapid pulse than is usually seen when a patient with the clamp goes on well. More opium was required, and was given for a longer time after operation than usual. Indeed, the condition for six days was that of a mild attack of peritonitis of a sthenic form. The urine was highly concentrated, becoming ammoniacal after a few days, and depositing much ropy mucus. There was also a very free leucorrhœal discharge. The wound healed entirely by first intention. The bowels were relieved on the sixth day after operation. The urine began to clear on the eighth day. Convalescence proceeded rapidly, and the report on November 30 was "quite well."



We append a short description of the trochar which Mr. Wells has used in his later operations. It is represented in the accompanying woodcut, as made by Messrs. Weiss, but with an inaccuracy of considerable importance, as the calibre of the canula behind the holes which receive the points of the hooks should be larger than it is represented, entirely filling up the opening made in the cyst. The instrument is shown as ready for use, only a portion of the India-rubber tube, however, being seen. The point and an inch or two of the canula having been thrust into the cyst, the fluid instantly runs along the canula to the tube. By pressure on the thumb-piece, seen close to the name of the makers, the point is then withdrawn inside the canula, as shown by dotted lines. As the cyst becomes lax after some fluid has escaped, the hooks are raised by depressing the two handles, and the cyst is drawn forwards until it can be securely fixed by allowing the hooks to fall upon it, and hold it against the canula. The fluid is thus kept within the cyst by the same instrument which serves to draw it out from the abdomen. The India-rubber ball at the entrance of the tube is useful in case of any obstruction of the canula or tube by any lumps of fibrinous or fatty matter, or semi-solid contents of the cyst of any kind, the action being that of an ordinary enema syringe.

UNIVERSITY COLLEGE HOSPITAL.

DOUBLE APOPLEXY, PRESENTING SOME OF THE FEATURES OF GENERAL PARALYSIS OF THE INSANE, RUNNING AN ACUTE COURSE.

(Under the care of Dr. HARLEY.)

[Reported by MR. ANDREW STUART, Clinical Clerk.]

MARY B., aged 35 years, admitted into the Hospital August 17, 1863.

History.—Is single, and has followed the occupation of governess for fifteen years. Is a native of a country town, but has resided in London during the last four years. Has always lived badly both as regards food and drink. Had once a severe attack of palsy. Her present illness began about a month ago, when she was attacked with vomiting and a pain in the epigastrium. From information received from her friends, it appears that latterly, within the last month more particularly, she has been wandering about, and otherwise behaving as if she were intoxicated. She staggered when she walked, and had a drowsy, sleepy appearance. She was brought to the Hospital in consequence of having had a fit. On admission she was in a semi-comatose state, but could be easily roused, and when roused could talk pretty rationally.

Present State.—Complexion dusky; head hot; but skin of body cool and dry. Mouth drawn slightly to left side. No paralysis of limbs. When roused sensation not appreciably affected. Occasional twitchings of arms. Pupils normal; do not answer readily to the stimulus of light. Arteries of arm cord-like to the feel, and tortuous. Pulse 80. Murmur with the first sound at both base and apex of heart. There is œdema of legs and ankles, most marked in left leg. No pain on pressure in loins. Patient says she has no pain anywhere. Urine turbid, alkaline, contains a large amount of albumen. Ordered calomelanos, gr. iv.; pulv. jalapæ, gr. x. Powder to be taken immediately. Balneum vaporis.

18th.—The patient passed a very restless night, constantly getting out of bed. Bowels acted three times. Has also passed urine in bed. Is very drowsy, but easily roused. Œdema of feet less. To be dry-cupped over loins, and a mustard poultice afterwards applied. 9. p.m.—Somewhat better; was awake when visited; could talk about various persons. Pulse 80; weak. To have a vapour bath.

19th.—Is considerably better this morning. Complains of nothing but thirst. Bowels freely opened; motions passed on the bed. Complexion dusky yellow. Tongue covered with a dirty slate-coloured fur. Has occasional twitchings of right arm. Pulse 70. Urine alkaline, contains copious albumen. Specific gravity 1015.

20th.—To-day patient is considerably better. Can talk rationally.

21st.—Had another fit this morning at twenty minutes past eight, from which she never rallied. Died at 11 a.m.

Autopsy 3·5 *p.m.*—Calvaria adherent to dura mater, and dura mater adherent to brain in several localities. After removal a small quantity of lymph of long standing is seen along the surfaces of brain, close to the longitudinal fissure. External surface of brain is not congested, nor does the internal surface of brain show an excess of red points; on the contrary, it is rather paler than usual, and very firm to the feel. On cutting down to a level of the ventricles, about two drachms of bloody serum escaped from the right, and on removing the top of the left ventricle a portion of a clot of blood projected from it. In the right hemisphere, exactly in the centre of the brain, both from before backwards, and from the middle line outwards, is a hard old clot the size of a marble. In the left ventricle is a fresh, large, soft clot containing at least two ounces of blood, on removal of which the brain substance beneath was found perfectly soft, and when the cavity (from which the clot was removed) is filled with water, the brain substance looks flocculent. The brain tissue all round the ventricles is hæmorrhagic, pulpy, and broken down. In the choroid plexus of the left ventricle are a number of small cysts, varying in size from that of a pin's head to a barleycorn. In the coats of the basilar arteries is a great quantity of atheromatous deposit. Pericardium opened: Heart firmly contracted; there is a white patch, not very old, near the apex on the anterior surface, and also on the left auricle; it is easily torn off. Left ventricle measures 1⅜ inch at its thickest part; commencing ossification of semilunar valves at their bases. Tricuspid valves thickened, and very opaque; old lymph in the left auricle. Heart weighs 16 oz. Lungs emphysematous. Stomach healthy, filled with food; intestines very much contracted. Liver examined *in situ*, dark, congested; gall bladder full, healthy. Spleen small and firm, weighs 1¾ oz. Kidneys contracted; left weighs 2½ oz.; right firm, small, and hard; cortical substance much diminished, weighs 4½ oz.

Clinical Remarks by Dr. Harley.—The case before us is interesting not only on account of the woman having recovered from her first attack of paralysis, notwithstanding that the clot remained firmly impacted in the brain, but more particularly on account of the succeeding apoplexy not inducing ordinary paralysis, but a form of disease which within late years has been designated "general paralysis of the insane." It is to this latter point that Dr. Harley specially directed attention. In the general paralysis of the insane the "paralysis," he said, bears little analogy either to ordinary paralysis or to muscular palsy; for while in ordinary paralysis the nerves are unable to communicate the mandates of the will to the muscles, and in muscular palsy the muscles are unable to obey the nerve stimulus, in the "general paralysis of the insane" neither the nerves nor the muscles are at fault; but the patient's power of co-ordinating the action of the muscles and nerves is lost. Hence it is that the patient does not drag his limbs as in ordinary paralysis, nor toss them as in muscular palsy, but merely walks unsteadily—like a drunken man—for the limbs have not lost their power, but the individual the power of controlling and directing their movements. The first observable symptom of the disease, Dr. Harley remarked, is in general an impairment of the speech; the second, the unsteady gait (the lower usually become affected before the upper limbs). The pupils are contracted, the senses are blunted, the patient neither sees, hears, smells, nor feels acutely. As the disease advances he loses control over the sphincters—urine and fæces are passed involuntarily. He becomes bed-ridden, loses the power of swallowing, and, if he lives long enough, gets covered with bed-sores, and at length sinks into the tomb a helpless and exhausted mass of humanity. During the course of this disease there are occasionally paroxysms of convulsive twitching of the limbs and facial muscles, congestion of the face, confusion of ideas, or even unconsciousness. All of the before-mentioned symptoms were presented, in a more or less marked degree, in the case before us, with the exception of bed-sores and their concomitant helplessness, which arose, no doubt, from its having run an acute course. One of the earlier symptoms, as Dr. Harley remarked, was also absent; for although the pupils scarcely obeyed the stimulus of light, yet they could not be said to be abnormally contracted.

THE LONDON HOSPITAL.

GIDDINESS, PAIN IN THE HEAD, AND VOMITING COMING ON SUDDENLY — AMAUROSIS — NO PARALYSIS — DEATH ELEVEN WEEKS AFTER THE FIRST SEIZURE—AUTOPSY—APOPLEXY IN THE MIDDLE CEREBRAL LOBE.

(Under the care of Dr. HUGHLINGS JACKSON.)

Chas. T., aged 32, was admitted an out-patient under the care of Dr. Hughlings Jackson, September 11, 1863.

He was brought to the Hospital by his brother. He looked in extreme distress, and suffered violent pain in the head.

Seven weeks before, whilst at his duties as superintendent of workmen at the docks, he was seized suddenly, at 10 a.m., in the midst of conversation, by giddiness. He felt what he called "a deathly sensation." He went up to the warehouse and was very sick, and had violent pain in the head, which never left him until his death. He walked home to the Minories at 12 o'clock. He was, his wife said, very pale and low, complained of pain in the head, was very cold, and (his wife mentioned this several times, but Dr. Jackson never noticed it) the left eye "seemed smaller than the right."

Although the pain never left him, and although he vomited every day until his death, he improved enough to be able to go to work for five days, but all along he never slept from the pain. His sight began to fail three weeks from the beginning.

When Dr. Hughlings Jackson saw him, although he was very ill, yet there was no loss of intelligence and not the least defect of temper. There was no trace of any paralysis in any part of the body. His pulse was quiet, and, in fact, the only symptoms were pain in the head, vomiting, defect of sight, and loss of sleep. His heart, lungs, and kidneys were sound. There was no history of syphilis, rheumatism, nor of gout, and he had not been intemperate.

His sight was so far bad that he could not read, but he could find his way about. [The following week he came to the Hospital by himself.] The pain did not affect the face, and was therefore not due to anything implicating the fifth nerve. He suffered a good deal from pain at the junction of the nose and the forehead, but it did not follow the course of any nerve trunk. There was no deafness, nor history of disease of the ear nor of injury, and it was not therefore likely to be due to abscess. The pain was not onesided. The vomiting was what may be called purposeless, as it seemed to come on without any obvious cause, and often when he had taken no food.

Unfortunately, the eyes were not examined by the ophthalmoscope at the first visit. Iodide of potassium was given, in the hope that this might be some disease of the membranes. (The suddenness of the seizure was not ascertained until afterwards.)

A week later he came to the Hospital, and said that he was much better, but there was no obvious improvement.

September 30.—Dr. Jackson called on him. He had been getting worse, the pain in the head being more severe, and the vomiting more frequent. There was still no paralysis, but the sight was worse, although the eyes looked normal to ordinary observation. There was no fever, no shivering, no convulsion, and his mind was clear, and, what is singular in severe brain disease, he was extremely patient and courteous.

October 9.—Still worse, and now he was drowsy, although he was never fairly asleep. The pupils, which were normal, were dilated by atropine, and an ophthalmoscopic examination was made. Both optic discs were injected, there being also a coarse reddening all round them, which quite destroyed their natural outline and appearance. The veins were extremely large and dark, seeming to bulge for some distance over the discs. Near the centre of the discs were two or three white glistening shapeless patches. The rest of the fundus was healthy. Both eyes were quite alike.

He died October 13. The whole of the brain was remarkably healthy, except the left middle lobe and the corpora quadrigemina. In the left middle lobe was an effusion of blood in various stages, some mixed up with creamy cerebral matter, forming a very soft greyish mass, and the other quite red and as if recently effused. Except at one small point in front, near the sphenoidal fissure, the disease was quite surrounded by a healthy wall of brain-substance, but at the point mentioned, on trying to detach it, the brain tore, for it and the membranes were there matted to the bone for a space about the size of a sixpence. The corpus striatum and thalamus opticus were quite intact. The optic nerves looked quite healthy, but in the corpora quadrigemina were a few small extravasations of blood.

In this case, from first to last, there was no paralysis, so that it seems pretty clear that very few, if any, of the motor fibres reach the middle lobe of the brain. As there was no disease of the membranes, it is difficult to explain the extreme pain. It is not likely to have been due to the slight adhesion mentioned, as the pain was on both sides, and, for the same reason, and also because the pain did not affect the face, not due to any disease of the contiguous fifth nerve. A microscopical examination of the small arteries was unfortunately not made, but the arteries at the base looked normal.

In a case of tumour of the brain, under the care of Dr. Hughlings Jackson at the Metropolitan Free Hospital, one small tumour was found attached to a filament of the eighth nerve on one side (it was impossible to say to which, as the tumour soon fell off). In this case there had been for two years violent pain in the head and almost daily vomiting. Vomiting is very common in cerebral disease, and often where there is no obvious affection of the pneumogastric. It is a symptom very often to be found in the first stage of cerebral amaurosis, along with severe headache.

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Medical Times and Gazette.

SATURDAY, DECEMBER 5.

RATIONALISTIC PHYSIC IN PERPLEXITY.— ALCOHOL AND IRIDECTOMY.

We need scarcely remind our readers how earnestly we advocate the true ancient *empirical* system—using the term in its etymological sense—*i. e.*, that practical method in Physic which rests upon ascertained facts, and never sets aside experience in favour of theory. For example, wine and fermented liquors either are or are not beneficial. It is either true or not that in moderate quantity they enable certain persons to eat better, sleep better, work better, and enjoy life and do all its duties with better spirits and more even temper. If this be true, they may be recommended to those persons on the ground of the benefits so conferred. Chemists and physiologists may set to work to explain the how and the why, and any explanation they may give will be most thankfully received; but no explanation can alter the cardinal facts. Alcohol may enter into combination, or may be oxydised, or destroyed, or may pass out of the body unchanged; still no practical Physician will allow himself to prescribe one glass more or less of it on any theory whatever so long as the fact of its beneficial influence remains undisturbed. Not so the rationalistic,—the man who walks on the quicksands of *à priori* reasoning, instead of trusting to the solid rock of ascertained fact. Plain matter of fact is nothing to the rationalistic, unless it squares with some pet physiological theory. For instance, civilised mankind for ages has improved its diet, by eating wheat instead of oats, and by using flour for human food and giving the bran and husks to the pigs. Dean Swift pictured amongst the philosophers in Laputa, as the creature of an extravagant imagination, the man who preferred chaff to grain. Undismayed by this, the rationalistic chemist fancies he discovers in bran a certain amount of nitrogenous matter, and, without inquiring whether the civilised stomach can digest it, he forthwith, on chemical grounds only, recommends bran for food. The question is not, Do you like bran? Can you eat it? Does it give you the stomach-ache and scour you? does it lodge in your colon, and require to be got rid of by castor-oil? or does it gently keep your sluggish colon moving? —but because bran in the crucible yields nitrogen, so you must eat it on theory, whether or no you can digest it in fact. The most pregnant instance, however, in modern times is afforded by the rationalistic doctrines about alcohol. Three years ago MM. Lallemand, Perrin, and Duroy, believed they had proved that alcohol was neither oxydised, converted, combined, nor destroyed in the organism, but that it was eliminated totally as alcohol; therefore that alcohol is "not food," as Liebig had declared it to be. We pointed out at the time (see *Medical Times and Gazette*, January 21, 1861, p. 42) that, although no doubt *some* alcohol was eliminated by skin, urine, and breath (a thing already familiar), yet that these authors entirely failed to prove that all the alcohol taken, or even any measurable portion, was eliminated. At the same time, we confess that we do not exactly know how it is disposed of, and should be very glad to learn. Nevertheless, the doctrine of M. M. Lallemand suited the teetotallers, so it was adduced on every platform as another proof that alcohol is poison and not food, and that, to use the vulgar expression, a gallon of ale is not so nourishing as a pennyworth of bread. It suited, too, all the penny-trumpeting writers and lecturers on popular Medicine and physiology; and so no doctrine has been more frequently hawked about at "Young Men's Improvement Societies" than that fermented liquors are useless and injurious, because alcohol is "not food." It will be some comfort to the matter-of-fact men that theorists are now coming round to them again. Rationalistic Physicians may now tell their patients that they *may* take sherry with their meat, because M. Edmond Baudot has proved that it is destroyed in the organism, and that it is *not* eliminated, save in trifling quantity, and consequently that alcohol *is* food. M. Baudot's conclusions shall be given next week. They will be a bitter pill to the popularity-hunting rationalistic. Meanwhile, though the lesson is valuable, we must say that we blush at the facility with which long-accustomed articles of diet, employed on the solid ground of utility, are attempted to be discarded by some of our weaker brethren, on a mere hypothesis, because they do not accord with an arbitrary and absurd definition of "food,"—a definition, by-the-by, which would pronounce water, bone, earth, and salts *not food* equally with alcohol.

Iridectomy is another remedy, the use of which is gravely disputed on rationalistic grounds. Here is an operation which is said, by a large number of eminent ophthalmic Surgeons, to be a means of checking a most insidious disease, ending in perfect, hopeless blindness. On the other hand, some equally eminent ophthalmologists object to it. Why? Of course, the objection to be valid must be that it does not check incipient blindness; but that it is (as is alleged openly enough in conversation) a reckless way of injuring sound eyes that require no operation. Now, here is the test. Can it be shown that iridectomy saves an eye? That out of similar or equal cases, the eyes iridectomised recover, and those let alone perish? This is the proof wanted, and there are men of character and standing who say they can supply it. If they can, iridectomy stands; if not, it falls, and they with it. Let us have the facts. But we must say that an opposition to iridectomy, founded on mere *à priori* or rationalistic grounds, is too silly, and shabby, and womanish to be heard outside a conclave of teetotallers. If we are to reject remedies because Surgeon A. conceives them to be "contrary to the established principles" of Surgery (*i.e.*, to Surgeon A.'s principles), or because they contravene a dogma of the immortal Hunter, or because the *British Medical Journal* cannot understand them, the sooner we give up all idea of progress the better. So little good has yet been done by the sanguine persons who set to work to invent remedies, and treat diseases on "strict pathological principles," that we confess we have some hope in a remedy whose *modus operandi* defies for the present the efforts of "British Medical" wisdom to understand it. Iridectomy is no worse off now than cinchona was 200 years ago.

THE CASE OF SYMM *v.* FRASER AND ANOTHER.

Again we have to direct attention to a Medical trial. Disgraceful to our system of jurisprudence, unjust and cruel to those members of our Profession who have been their victims, and injurious to the public interests identified with the fearless performance of his duties by the practitioner of medicine as have been several of the trials which during the past and present years have occupied the law courts, we think that in its main features this one is worse than any that have preceded it. There are many subjects on which it is quite possible that people uninfluenced by interested and personal motives, and even unbiassed by prejudice, may hold different opinions. On the case of "Symm *v.* Fraser and Another" we assert, without the fear of contradiction, that it is utterly impossible for any one who examines the evidence on both sides with a clear, unprepossessed judgment, to arrive at any other conclusion than that the action was one of the most groundless, vexatious, and iniquitous ever brought before a legal tribunal.

Whilst we most heartily congratulate Dr. Fraser and Dr. Andrews on the immediate and unanimous verdict in their favour returned by the jury without quitting the box, and on the very able and uncompromising summing-up of Lord Chief-Justice Cockburn—for which not only the defendants but the whole Medical Profession are indebted to his Lordship—we cannot shut our eyes to the fact that this action is an evidence of the strong *animus* which prevails amongst the unthinking and uneducated against the representatives of Medicine. Had they not relied on the support of popular prejudice, would Mr. Lewis, of Marlborough-street; Mr. Montague Chambers, Q.C.; and Mr. Huddleston, Q.C.—the same attorney and barristers, be it observed, who conducted the plaintiff's case in Hall *v.* Semple—have deemed it advisable to venture such a proceeding? Had it not been well aware of the tastes of its readers, would the *Times* newspaper have thought it necessary to publish the evidence for the prosecution in full, whilst it jumbled up that for the defence in an incomplete and confused abstract? The latter, although on it depended the reputation of two Medical men of unimpeachable Professional and personal character, was not piquant enough to suit that morbid craving for stories of unprincipled Doctors and ill-used patients, of which Messrs. C. Reade and Dickens are just now showing so full an appreciation. The only redeeming feature in this trial is that it has brought to light a course of conduct on the part of two Medical men which, on the principle of *ex uno disce omnes*, offers the best refutation to the calumnies which have lately been sown broadcast on our Profession.

For the benefit of those of our readers who have not waded through a report of five days of speeches, examinations, and cross-examinations, we shall give a slight sketch of the facts of the case. The plaintiff, Mrs. Symm, is a widow possessed of some property, the defendants were Drs. Fraser and Andrews. The former gentleman, after practising with great success and high reputation for more than a quarter of a century in Camden Town, retired a few years ago from the more arduous duties of general practice, and having become a Doctor of Medicine of the University of Edinburgh, and a Member of the Royal College of Physicians of London, is now in practice as a Physician in that quarter of town. Dr. Andrews, a Doctor of Medicine of the University of St. Andrews and a Member of the Royal College of Surgeons of England, was formerly in partnership with Dr. Fraser, and is still in general practice in the same locality. In 1861 the plaintiff was residing as the tenant of Dr. Fraser in a house in Oakley-square, Camden Town. In December of that year the circumstances which gave rise to this action occurred. At that time an imbecile brother and an aged woman of the name of Hill resided with the plaintiff. She had no other attendant. On December 23 she sent for Dr. Andrews. In her evidence she said that she had been suffering for some weeks before from an inflammation of the knee, and that about the 19th of December she was "taken suddenly ill," "something of a shock, as if the blood had ascended from the lower part of the system to the upper, with a sense of suffocation and fermentation, and a blackness round the eyes." Whatever this description may mean, Dr. Andrews' account of her condition was that she was labouring under the effects of drink, and that this was really the case was proved by the evidence of Mrs. Hill, her attendant, who deposed to the large quantities of wine and other stimulants consumed by her. Dr. Andrews cautioned her against continuing her mode of living, but it was clear, on his subsequent visits, that she was still drinking, and was fast verging into a condition of *delirium tremens*. The aspect of the case became so serious that he called in Dr. Fraser on Christmas eve. The latter gentleman's attendance on the case lasted sixty hours, during which time he saw the patient nine times. At his first visit he found her "very drunk," in a state of maudlin intoxication, crying and whining, but not then in the condition of delirium tremens. She had been up for several nights, her dress and apartment were filthy in the extreme, and the stench of the latter was so sickening that the two gentlemen were glad to go into the passage to hold their consultation. On Christmas night, between three and four a.m., Dr. Fraser was called out of his bed by Mrs. Hill, who said she was afraid she should be murdered by the plaintiff if he did not come. He went, and found the patient in a condition of violent excitement, and raving for brandy. The symptoms of delirium tremens were then declared. She had the peculiar tremor which attends its earlier stages, and was excessively restless, constantly turning from side to side, as if she saw something. On one of Dr. Fraser's visits he found her grasping her throat, and exclaiming, "I want to cut my throat;" on another she staggered on her knees, and called out, "Oh, give me a glass of brandy! a hundred pounds for a glass of brandy!" In addition to the evidence of Drs. Fraser and Andrews, the excited and dangerous condition of the plaintiff was proved by her attendants and several policemen who were called in. It came out in their evidence that she had attempted to get out of window on the evening of the 28th; that she had rolled about on the door-mat of the passage; that she procured sherry through her imbecile brother, and drank it by half tumblersful; that she was most noisy, filthy, and violent; that when wine was kept from her by her attendants she offered a policeman her gold watch and chain, and afterwards her purse, to procure her a bottle; that she assaulted her attendants, striking one and pulling out the hair of another; that on one occasion she broke the neck of a bottle of sherry with a poker in order to get at its contents; that she tried to procure a knife from the kitchen in order to cut her throat, and in a struggle with her nurse broke a window. We have here merely made a selection from the enormous body of evidence given in proof of the correctness of the diagnosis formed by Drs. Fraser and Andrews; but if any further proof be required, it is furnished by the evidence of Dr. Barnes. This gentleman had previously known something of Mrs. Symm, through his sister, Mrs. Taylor, and was called in, in consultation, on December 27. He found her in "a high state of delirium tremens of a marked character from the use of alcohol," and on a second visit, on January 3, discovered her lying outside the bed-clothes, with her person exposed, in a state of utter intoxication from rum. Through the treatment pursued by the defendants—the administration of morphia and restriction from intoxicating drinks—the patient got better. On January 12 she went to Bath, leaving her house deserted and unprotected, filthy, and in the utmost confusion, and her gold watch and chain on the table of her apartment. She returned to London on February 1, and ten months after, in January last, commenced an action against Dr. Andrews alone, but she subsequently abandoned it, and entered proceedings against both the defendants.

Such, then, is an outline of the condition of the plaintiff during the time she was under the care of the defendants; we have now to inquire into the alleged grounds of action. The original declaration set forth, that "the defendants and divers other persons, as their servants and by their command, entered the plaintiff's dwelling-house, and made a great disturbance therein, and stayed therein for a long time, and assaulted and beat the plaintiff and imprisoned her, and put her under bodily restraint, under the false and unfounded pretence she was a person of unsound mind, incapable of taking care of herself, and unfit to be at liberty, and kept and continued her so imprisoned for a long time, and prevented her friends from having access to her, and kept her without proper food and sustenance, and forced her to take and swallow noxious drugs and compounds, and thereby injured and impaired her health." The defendants, to this allegation, pleaded "Not guilty," and also that they did what was complained of by the plaintiff's leave. Now this declaration, stripped of redundancies for which there was not a tittle of evidence, amounted to this, that the defendants had placed the paintiff under a certain amount of restraint by putting her under the care of three attendants—two female and a male—who were directed to prevent her injuring herself and others, and to debar her from the use of alcoholic stimuli, except in prescribed quantities. Had the facts of the case allowed the defendants to plead that they had themselves sent and authorised the nurses and the male attendant to take care of the defendant, and that her condition justified them in so doing, it would, on the evidence of her condition given at the trial, as the Lord Chief-Justice remarked, have been a complete answer to the action. But it so happened that Dr. Fraser had nothing to do with sending in her attendants beyond mentioning, when requested to do so by a friend of the plaintiff's, a channel through which a nurse might be procured. Neither was Dr. Andrews much more implicated in the matter. In the early part of his attendance, on December 25, at the request of the plaintiff herself, he recommended a Mrs. Baker, a monthly nurse, who came to attend on the plaintiff, but was dismissed by her on the next day. The other female attendant, a Mrs. Slack, was obtained by Mrs. Taylor, the sister of Dr. Barnes, who came to pay a good Samaritan visit to Mrs. Symm, through the channel indicated by Dr. Fraser, but, as we have said, neither by his order nor authority.

The male attendant, Shears, was also engaged through the intervention of Mrs. Taylor. That lady, at the time of the trial, was unfortunately on the Continent, and the defence did not consider it necessary to undergo the enormous expense of a commission in order to procure her evidence. However, it was proved that the imbecile brother of the plaintiff, who had only wit enough to supply his sister with stimulants and to resent any interference with her, kept a large and savage dog in the house, which, on several occasions, flew at Mrs. Taylor and the female attendants. Partly to protect themselves from the brother and dog, and partly to insure the safety of the plaintiff from her own violence, Mrs. Taylor applied to Dr. Andrews to recommend a man to come and stay in the house. Dr. Andrews mentioned a man named Shears as a person who got his living by attending on nervous invalids, and in the course of one of his rounds called at Shears's house, and directed the latter to see Mrs. Taylor at the plaintiff's. Shears went to the house, and was engaged by Mrs. Taylor. The allegation therefore, that either the nurses or Shears were engaged by the defendants, fell to the ground, entirely unsupported by evidence. But then the question arose whether, although the attendants were not engaged by the defendants, the latter, finding them in the house, did not make them their servants or agents in imposing restraint on the plaintiff. This was the only view of the case by which the action could be sustained, and it was on it that Chief-Justice Cockburn charged the jury. In doing so, however, he took especial pains to insist on the difference between counsel and authority. In every case in which a Medical man is called in it is his duty to give advice or recommendation as to the management of the patient, but this does not necessarily imply that such counsel amounts to authority or command. The distinction is a nice one, but it is of the utmost importance. If authority or command are proved, it is necessary that the defendant should prove that he is justified by a regard to the patient's safety, or that of those about him. In the case of counsel only no such responsibility is incurred. It is clear that in this case the plea of justification was amply supported by the facts, but unfortunately, for the reason above stated, it was not put upon the record. It is only necessary to add that nothing the defendants did could be construed into more than recommendation and counsel; the restraint imposed was of the mildest description compatible with the safety of the patient, and there was not one tittle of reliable evidence to prove the violence alleged in the declaration. It was clear, as the judge remarked, that all that had been done was for the protection of the unhappy lady and those about her, and to check the course of the malady. Of this the jury were so fully convinced, that, almost without turning round to consult, they gave their verdict.

There remain yet, however, several aspects of this remarkable trial unnoticed. We have already hinted our regret that the plea of justification could not be set up; it would not only have completely and at once defeated the plaintiff's case, but it would have afforded an invaluable precedent for Practitioners of Medicine in future. We now turn to some other of the details. In the first place we would notice the conduct of the lawyers for the prosecution. The fact that the same attorney conducted the prosecutor's case in Hall *v.* Semple and Symm *v.* Fraser and Andrews we leave for the consideration of our readers; it requires no comment. But we may well ask, Is there to be no limit placed on the licence allowed to counsel? The opening speech of Mr. Montague Chambers, in which he sought to make up for the lack of evidence by appealing to popular feeling, and charging the defendants with "ignorance, cruelty, and inhumanity," was scarcely to be equalled for its unscrupulous and unwarrantable tone. His attack on the defendants, we are glad to say, was noticed both by the judge and by Serjeant Parry, who ably conducted their cause. But the effect calculated on was produced. The morning papers headed the case day by day with the sensation title of "Extraordinary Case of Alleged Insanity," although no question of insanity had ever arisen; the case for the prosecution was given in full; everything was done to prejudice the defendants, and nothing but the triumphant character of their defence could have cleared them from the most injurious and unfounded allegations urged against them. But it is not alone on the conduct of the lawyers in the case that we are bound to comment. Three Medical men appeared for the prosecution. They were Mr. Tate, Surgeon, late of Sunderland, and Mr. Barrett and Dr. Tunstall, of Bath. We regret that any of these gentlemen should have lent their countenance to the persecution to which their Medical brethren were submitted. We have before shown on high legal authority that Medical men are not *compelled* to appear in the witness-box in such actions. It is, however, with the evidence of Mr. Barrett and Dr. Tunstall that we are chiefly concerned. Mr. Tate was only called to prove the fact that when he had attended the plaintiff at Sunderland, a considerable time before, he did not notice any symptoms or appearances indicating habits of intoxication. Mr. Barrett and Dr. Tunstall saw the plaintiff during her stay at Bath in January, 1862. The former stated in his evidence that he should not consider her state of mind when he saw her was healthy. "She showed a neglect of her person, and her room was not in a nice state; she had an aversion to go to bed, and she seemed to be suffering from great mental annoyance; this condition might have been produced by her having a couple of keepers over her—it did not imply *delirium tremens.*" He went on to state that at the time of his attendance he was under the impression that her state might have arisen from drink, but he was bound to say that he might have been mistaken, and that it might have arisen from a gouty state of the system ill-developed." Dr. Tunstall saw the patient twice at Bath; he came to the conclusion that she was suffering from "travelling gout," or gout travelling about the system. She presented no appearances of having suffered lately from *delirium tremens.* He said that in a case of delirium tremens he should not in the first instance advise restraint, he should order knives, etc., to be put out of the way, and if the patients threatened to commit murder or suicide; he should ask them "Why?" We do not here stop to criticise these gentlemen's evidence, extraordinary as some of it was. It may be that Practitioners at Bath are peculiarly alive to the symptoms of "travelling gout," and that the skill of these two gentlemen in retrospective diagnosis is such that they are competent to give an opinion as to whether a patient had or had not suffered from delirium tremens some weeks before. Dr. Tunstall may be in the habit of arguing with delirious patients on the reasons they may have for threatening suicide and murder. All this may be so, but we ask them whether they think the code of Professional honour allows them to go into a witness-box to offer theoretical evidence as to a previous condition, which they did not witness, for the purpose of damaging the cause of their Professional brethren? They cannot deny that their appearance in Court was intended to injure the defendants' case, by throwing doubt on their diagnosis, and we have no choice but to assert that that appearance was sanctioned neither by Medical science, nor by the unwritten but recognised laws of Professional conduct. On the other hand, we notice with pleasure that at this crisis Drs. Fraser and Andrews were not deserted by their Medical brethren. Dr. Tweedie, Dr. John Ogle, and Dr. Ramskill, all appeared for the defendants; the former Physician volunteered his evidence. Dr. Walshe also was in Court, ready to be called, during a great part of the trial, and it was owing to an accident that his testimony was not obtained.

We cannot end this article without expressing our high admiration for the conduct of the defendants and our deep sympathy with them. Rejecting all suggestions of compromise, they fought the battle with honour to the end, and have gained a victory which redounds to the credit, not merely of themselves, but of the whole Profession. But it must not be supposed that this has been done without enormous sacrifices, without intense mental anxiety, and a large pecuniary loss. Even supposing the costs are paid by the plaintiff, it is well known that taxed costs represent but a moiety of the expenses of such a trial. There were two senior and two junior counsel employed for the defence; the fees to the seniors were thirty and forty guineas respectively, to each of the juniors fourteen guineas, besides refreshers and fees for consultation to each barrister on every one of the days during which the trial lasted. This alone represents a large sum of money, but in addition there are the expenses of twenty-two witnesses for five days, and all the attorney's charges. We will not enlarge on the mental anxiety the defendants must have endured during the many months this unscrupulous and vindictive action has been hanging over their heads. Our readers can all estimate that. But we appeal to the Profession, in the first place, to testify substantially their sympathy and recognition of the service rendered to the whole body of Medical Practitioners by Drs. Fraser and Andrews; and in the second place, to enter into a combination to protect themselves for the future against similar proceedings. It is rumoured, and we suspect with truth, that the plaintiff would never have ventured on this lawsuit had it not been for the verdict given in the case of Hall *v.* Semple. The precedent then set up may yet again be relied on. After the experience we have had during the past two years, we cannot suppose that such actions are likely to cease. The practice of Medicine has its bright sides, but it has also its dark, and this is one of them. The Profession can only accept the position and endeavour to obviate its evils. The establishment of a Medical Defence Association, for providing funds for the defence of its members in all legal proceedings taken against them on the ground of Professional conduct, appears to be the only course which will meet the requirements of the case. The lawsuit of Symms *v.* Fraser and Andrews elicited from Lord Chief-Justice Cockburn a noble tribute of praise to Medicine and its representatives, but we fear that the opinion of his Lordship is by no means universally shared. At a time when the ingratitude and vindictiveness of patients and the rapacity and venality of lawyers may be stimulated into action by a prejudiced and unfounded state of popular opinion on the subject of the motives by which Medical Practitioners are actuated, the Profession can ill afford to neglect a sure and simple means of self-preservation and defence.

THE WEEK.

THE DEGREE OF MASTER OF SURGERY IN THE UNIVERSITY OF CAMBRIDGE.

The University of Cambridge held, last week, its first examination for the degree of Master of Surgery, and we have to acknowledge the receipt of the papers, three in number. The first, on Surgical Anatomy in five questions, asks successively for the superficial veins of the arm, with their relations to venesection; for the arteries of the hand, and the treatment of palmar hæmorrhage; for the anatomy and relations of the femoral artery; for certain points respecting inguinal hernia; and for the anatomy of the subclavian artery. The second, on Surgery, contains twelve questions: mortification; the microscopical characters of pus and cancer-cells; the external and ophthalmoscopic appearances of glaucoma, with its treatment; the cause and symptoms of urinary calculi; the symptoms and treatment of wounded lungs; fractures of the clavicle and tibia; the diagnosis of popliteal aneurism; certain points respecting hip disease; the treatment of drowning; fracture of the neck of the thigh-bone; retention of urine; and the symptoms of cancer of the rectum. The third, on Midwifery, in seven questions, requires details as to premature labour; extra-uterine pregnancy; ruptured uterus; the prevention of hæmorrhage in labour; the precautions to prevent flooding; puerperal peritonitis; the changes in the breast indicating pregnancy; and the condition of the fœtus at the sixth month. In addition there was a *vivâ voce* examination in each subject, and the candidates were requested to report upon selected cases in the Hospital. Three gentlemen passed the examination, and it appears likely to be favourably considered among the under graduates. The granting of Surgical degrees by our English Universities is a point of some importance, and one likely to be of good result, as tending to connect the Medical Profession with them in both its branches, and not, as hitherto, in one department, to the entire exclusion of the other.

OPENING OF THE NEW WING OF THE RADCLIFFE INFIRMARY, OXFORD, AND THE BISHOP OF OXFORD ON "MEDICAL HARDNESS."

THE new buildings were formally thrown open on Saturday, the 21st ult., with some ceremony, at which the Duke and Duchess of Marlborough, the Bishop of Oxford, Dr. Acland, and other persons of distinction were present. From a Report which has been forwarded to us, we learn that the new buildings are thoroughly good, and embrace all the improvements suggested by modern sanitary science. We make a long extract, in the hope that it will suggest improvements in other Hospitals :—

"They consist of a new accident ward with all the requisite appliances ; a complete arrangement for out-patients ; a new Dispensary ; and a room for minor operations or casualties adjoining the accident ward.

"In the old building, 100 persons have been counted waiting for their medicines in a room 23 feet by 6 feet 6 inches, with cubical space of less than 20 feet for each person ; and the old accident ward, being only 10 feet 10 inches high, provided 795 cubic feet for each of 18 patients, whereas the new ward gives to each of 20 patients 1860 cubic feet, and has in addition far better arrangements both for ventilating and warming.

"The new out-patients' hall is provided with every comfort for the poor people.

"The new accident ward represents what is called 'a ward unit on the pavilion principle,' to which is added, for convenience, a casualty room for the first reception of accidents, and for the various minor Surgical casualties which come under the care of the Resident Surgeons in a Hospital. Such an unit comprises the ward itself, with closets, bath-room, nurses' room, scullery, nurses' closet, and other lesser appliances.

"The pavilion principle is that of erecting a ward separate from the rest of the Hospital except at one end, so as to allow free ventilation and light from either side of the ward.

"The ward is 78 ft. in length, by 26 ft. 6 in. in width, and 18 ft. in height. Twenty bed-places are fitted up, giving to each bed 1860 cubic feet of air. There are six windows on the south, with a similar and opposite set on the north, excepting only the second from the entrance, which is replaced by a fire-place. The sashes are of oak, with stout plate glass ¼ in. thick, opening both at the top and bottom. To prevent draughts either through the window-frames or from the cold outer glass, glass frames have been provided resting on the window-sill, 2 ft. 4 in. in height, and of the same width as the window, which will in effect make the lower part of the windows double ; and, if required, these frames can be raised to any height hereafter. Ventilation does not wholly depend on the windows. In the ceiling, between each truss of the roof, is a hinged trap-door, readily opened and shut, all together affording 72 superficial square feet of air passage into the roof space. The roof is pierced north and south, and east and west, by eight opposed open ventilators for the exit of foul and introduction of fresh air. Besides, in the centre of the floor, between the feet of the beds, are six apertures, which can by opened or closed, communicating with a chamber in a cellar east of the ward. This chamber is supplied with fresh air by an aperture 3 ft. by 2, and may be heated by the furnace which heats the out-patients' hall and the shop corridor. The air-flue can be disconnected at will.

"In addition to these sources of air and means for promoting its due circulation, there are in each pier, between the windows, air flues with regulating valves, which open through the wall into the outer air.

"There are two open fireplaces, one on the north side replacing a north window, one at the west between the west windows. In the mantelpiece there is an aperture leading to the ventilating shaft which surrounds the flue. This shaft is constructed of Jenning's patent flue-pipes.

"The ward is built over an excavated cellar 9 feet deep. The joists are plastered on the under surface, with pugging between them. The flooring is of one-inch deal, with three quarter-inch wainscot-oak laid upon it ; the latter dowelled and side-nailed. A slight current of air passes between the plastering and the pugging, and also between the pugging and the double floor.

"The spaces on the floor under each bed are covered with white glazed Minton's tiles, with a glazed red border. These tiles are bedded in Portland cement, which rests on a bed of concrete laid in between the joists. Any moisture therefore spilt under the bed will lie upon the tiles, and may easily be wiped off the polished surface. Between the bed-places the floor is, as elsewhere, of wainscot, the tiles not projecting beyond the edge of an ordinary bed, that they may not be stepped on by patients leaving their beds.

"Over every bed is a bed-pull. Curtains can be added, and fittings are prepared for curtain-rods ; but Miss Nightingale having been consulted as to the best kind of curtains, and she having declined to advise on the way of fitting what she considered should not be fitted at all, the Committee have not placed curtains.

"Two bed-spaces are placed between each window ; and every patient is separated from his neighbour by three feet on one side, and by four feet two inches on the other, and has a window at the head of his bed.

"From foot to foot of the beds on opposite sides are 13 ft. 6 in., allowing 6 ft. 6 in. for the length of a bed. Down the middle of the ward will be placed cabinets on wheels for Surgical appliances, and at the east end a dresser.

"The walls and ceiling are of cement, polished so as to prevent any noisome exhalations from lodging there. The tie-beams are of varnished deal. There are no ornaments or mouldings on which dust can rest. The colour of the cement is not uniform ; the foreman who was engaged on it left in the middle of the work, and caused thereby some difficulty. Indeed, the preparation of these walls has been troublesome in several particulars. Their cleanliness, durability, and cheerfulness make them, however, well worth the labour and expense.

"Besides the north and south windows, there are two west windows, one on either side of the fireplace. Every patient in the ward can look, if he will, down the garden in summer and in winter upon the open fire.

"At the south-west angle is a bath-room and a lavatory, also lined with polished cement. They are supplied with hot and cold water ; the basins are of enamelled iron in a slate slab, with supply and waste pipe ; the bath is on wheels. At the north-west there is a double closet, separated by a passage, and a urinal, all thoroughly ventilated. The bath-room and the closets are separated from the ward by swing doors, and outside these a warm-air flue from the hot-air apparatus, to approximate the temperature of the closets to the ward in severe weather.

"There are provisions for water supply on the self-acting process.

"The nurse's room to the east of the ward looks down the ward, but does not open into it, that she may have means of surveillance without loss of privacy. It has its own fireplace.

"Beyond the nurse's room is a scullery, with a small range for occasional cooking.

"Further east is a window-hatch for throwing foul linen into a truck outside the building ; a sink for slops from the ward, and a private closet for the nurses.

"On the other side of the entrance corridor is the casualty room, with its own proper appliances. A doorway leads hence into the garden for the use of the patients.

"The cost of the works up to the present time may be calculated at about £6070.

"No money has been spent in decoration, except in the out-patients' hall. Mr. Hill, the well-known painter of Oxford, generously expressed a desire to contribute to the works, and has given the entire painting of that large apartment.

"The Committee accepted this generous gift the more gladly, in the hope that an apartment so fitted and warmed may be used as a convalescent-room for the in-patients, when unoccupied by the out-patients. It cannot but have struck visitors to the Hospital that it would be far better for a large portion of the patients, if, when not confined to bed, they could spend part of the day away from the ward, in which they are now obliged to eat, sleep, and live day and night in company with those who are confined entirely to their beds, and who would be benefited by the diminution of numbers in their ward.

> "*The Committee would have advised the Court to confer a Life-Governorship on each of the ladies who held stalls at the Bazaar, on the late Mayor, who originated the scheme and who had the chief labour of arranging it, and upon the Architects. But they fear that the financial position of the Institution might make such a recommendation vain.*
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> "Miss Ashhurst, of Waterstock, has organised, with the consent of the Quarterly Court, a plan for giving soup to the out-patients who come from a distance on Saturday, and who experience great inconvenience, not to say injury, from abstinence for many hours.
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> "The Committee have been not only charged to prepare a room for this purpose, but have received from the Rev. James Ashhurst the necessary funds for providing a suitable cooking apparatus. This considerate act cannot be too widely known, for *it meets a serious evil too commonly felt in County Hospitals*."

The Duke of Marlborough spoke well on the duty of treating Hospital patients as our Christian brothers and sisters, and said truly that it was impossible to make them too comfortable. Dr. Acland followed to the same purport, and said that a thoroughly model Hospital at Oxford, before the eyes of the rising generation of landowners, would show them how the sick poor ought to be treated, and would suggest to them the duty of providing many comforts and means of living wholesomely which now are neglected through ignorance and bad custom. If we may venture to criticise the proceedings, we must say that we wish the promoters of this good work had set the example of discountenancing that mercantile spirit, that love of getting orders, tickets of admission, and other privileges in return for exertions or contributions. We hope that "the ladies who held stalls at the bazaar" will honourably reject the proposition to repay them by giving them a life governorship, or any other lien upon "the financial position of the undertaking." The Duke of Marlborough, too, said that, "*though he had been kindly permitted* to give a large number of orders" for out-patients, "he had in some instances, out of consideration for the funds of the institution, been obliged to refuse applications." We hope that his Grace, whom we look upon as a kind-hearted Christian nobleman, may live to see the day when an out-patients' department at a County Hospital may be looked upon as an old-fashioned error. The very idea of invalid persons coming long journeys in all weathers, hungry, wet, and tired, to get Medical advice is preposterous, though we gladly do honour to the piety of Miss Ashhurst, who provides the poor creatures in this case with soup. We think his Grace does scant justice to the "Medical men in country districts" in supposing that it is necessary to supplement their want of skill by this barbarous out-patient system, and humbly suggest better payment for the Union Doctors, which will bring greater skill if needed; further, we know of a great landed proprietor who brings down a town Physician to his country estate from time to time, and gives him a respectable fee to see the sick in consultation with the village doctor; so that there may be no reason to lament that the poor could not have a second opinion because the squire had no orders for the County Hospital. The Bishop of Oxford spoke of the value of a Resident Chaplain, and of the advantage of his presence "to diffuse the atmosphere of a higher world" upon the hearts of those who minister to the sick, to "counteract the tendency to become narrow and professional, and the impression of hardness often left upon the mind of the invalid." As the Bishop says this, we suppose the rebuke is well-founded, and bow to it. We certainly were not aware of it, and though there may be a few *hard* men amongst us, we had hoped that the impression left upon most invalids' minds was that of gentleness, tenderness, and self-devotion. We quite agree that a chaplain, with regular hours of daily prayer, must be an advantage to any institution where many men live together; but we must add that the advantage in this case may possibly be mutual. If the chaplain bring somewhat of the atmosphere of a higher world amongst Medical men, he may receive somewhat of a lesson in the duties of this world; and we venture to say that it will be a happy thing for religion when the diseases of the soul are as pertinaciously investigated as those of the body, and when the spiritual welfare of the people is cared for by the clergy with something of that entire devotion of all the faculties of mind and body which, we are thankful to say, animates most members of the Medical Profession in the care of the sick.

THE CASE OF CHARLES LAW.

An inquest on the bodies of the two female children found on the late Charles Law, whose attempt to dispose of them surreptitiously led to his apprehension by the police, was concluded on Wednesday. Both of the children had arrived at the sixth or seventh month of intra-uterine life, the lungs were not inflated, and on neither were there any marks of violence. A strong suspicion exists that Law was guilty of the crime of producing abortion, but in support of such a theory no evidence was produced. The statement Law made was that he had not delivered the children, but had merely undertaken to dispose of the bodies to save the burial fees. Considering the miserably poor class of patients who composed Law's practice, this falls within the limits of possibility, although in the highest degree improbable. The jury, in the cases of the children, returned an open verdict, that there was not sufficient evidence to show the manner of their death. On the same evening an inquiry was commenced as to the death of Law. It was proved that at the time of his liberation on bail on Monday he was suffering from delirium tremens, and that he died on the following Wednesday. He had before been attacked by delirium tremens, and had been warned by Dr. Walshe that another attack would probably prove fatal. The deceased was locked up at the police-station on Sunday morning. He was then perfectly rational. During his twenty-four hours' confinement he was seen by no Medical man, and was allowed none of the alcohol to which he was accustomed. Dr. Wm. Wallace, who was called to the deceased on the morning after his liberation, stated that he found him

> "Suffering from delirium tremens. Witness ordered him rest, nourishment, and stimulants. Stimulants were absolutely necessary in such a case. Deceased died next day. Death arose from delirium tremens. A man given to drink, and locked up for two days, and exhibiting aberrations of intellect on the Monday morning, ought to have been seen by a Medical man while in custody. Witness would have then given stimulants and nourishment. Delirium tremens generally yields quickly to treatment, and it was quite possible that if deceased had been Medically attended while in custody his life would have been saved. The Coroner said that if the information he had received was correct, the deceased while in custody was either out of his mind, or was shamming insanity. It would be very necessary to ascertain whether proper steps had been taken to discover whether he was really in a state of dangerous disease, or whether the symptoms observed were feigned. Police-constable Williams said that deceased appeared rational when taken to the police-court. He had received coffee and bread and butter for breakfast on the Sunday. When witness arrested him in the Kingsland road he called out for a person named Wyman, who was his assistant."

This case is only one of many which prove the necessity that every person who is locked up by the police should be subjected to Medical inspection. In the metropolis every police-station ought to have a Surgeon attached to it, whose duty it should be to make a daily inspection of the prisoners. The neglect of such a measure in this case probably cost Law his life, and defeated the ends of justice.

FROM ABROAD — AMERICAN HOSPITAL FOR WAR-HORSES — A DISCONTENTED AUTHOR—ABOLITION OF THE FRENCH INSPECTORS OF MINERAL WATERS—MARRIAGES OF CONSANGUINITY.

We find in the *American Medical Times* the following account of the establishment of a new Hospital for war-horses at Washington :—

"The Hospital exceeds in completeness of arrangements, neatness, and comfort all bureaux of this immense department, and excites not only admiration but wonder. From an insignificant organisation it has emerged into a vast establishment that rivals even the Hospitals of our sick and wounded soldiers, and saves thousands of dollars to the Government every month. The buildings have been constructed at great expense, nothing that could in any way tend to comfort and speedy cure having been omitted. Connected with each stable is a Medical office, supplied with all necessary remedies, bandages, Surgical instruments, etc., from which one steps out into a long passage between the stalls upon a floor of clay hardened and whitened almost like marble. Here are horses suffering from wounds of every description. The utmost care is taken in the preparation of their food, and in preserving cleanliness. Each animal has a bedding of straw or refuse hay, and is attended with the same regularity that characterises our city Hospitals. Wide, shallow troughs are provided, into which the invalids are led, and their wounds washed; and gentleness is used towards them to such a degree that each horse seems to appreciate the object of the attendants, and soon submits to the application of remedies as though he rather liked it. Great taste has been displayed (query wasted?) in ornamenting the stables with wreaths and other devices, made of evergreens, and the stalls are kept as white as lime can make them. In the warmest weather a cool atmosphere pervades the entire establishment, and in winter one might wrap oneself in a blanket, and sleep as comfortably on the straw as in the most sumptuous apartment, the ventilation being so arranged that the heat thrown off from this large collection of horses can be carried out through the roof, or confined, at pleasure. When first established the Hospital was supplied with Veterinary Surgeons, but their method of treatment not proving satisfactory, the old system of simple remedies and unremitting attention, practised in the regular army, was resumed with marked results. During a period of six months, nearly 50,000 horses were treated in this Hospital, of which over one-half were reissued to the army, and during a period of three months the cures, under the old style of practice, exceeded those of the Veterinary Surgeons by nearly 50 per cent. In addition to this, the enormous expenses incurred to furnish the latter with medicines (which included almost every drug and poison known to Medical science) have been reduced to a very small scale, while the horses that are cured enter the field with constitutions unimpaired by poisons, and as hardy as when purchased by the Government."

This somewhat bombastic statement must surely excite the envy of the free blacks, whose destitution is so appalling; and the exaltation of empirical over veterinary practice, disfiguring the latter part of it, leads us to receive some of the stated results with suspicion. However, under all circumstances, it is a humane as well as a sensible undertaking to make provision for this noble animal in his hour of calamity, and one well deserving of measured imitation. Overwork, scanty fare, and ultimate abandonment, is too often his fate in most campaigns.

A fine specimen of the *genus irritabile* was exhibited at a recent meeting of the Academy of Sciences. A. M. Passot having submitted some papers to the Academy, and feeling discontented with the report made upon them by the committee to which they were submitted, demanded that they should be remitted to the Minister of Public Instruction for his opinion. This drew a rebuke from M. Flourens, the Secretary of the Academy, who remarked "how such a demand was repulsive to all the usages, and contrary to the dignity of the Academy. Matters once decided upon by the Academy can never be remitted to the Minister, who possesses no quality for appreciating its judgments; on the contrary, it is he who frequently transmits matters from his own department for the purpose of obtaining the judgment of the Academy. These judgments are paramount. If M. Passot desire it, he may have an official copy of this judgment made, and send it to whomsoever it pleases him." "If I may be allowed," M. Velpeau added, "to give advice to the author, it is to address his work to the public, which is the last court of appeal in everything."

The tendency of French legislation has of late set in strongly for the removal of restrictions and monopolies, so that what with free trade and the abolition of the privileges of bakers, butchers, and theatrical managers, the enlightened Gaul finds himself fast drifting into the *laissez-faire* system of John Bull. Medicine itself is not without its dangers, attacks being about to be made on its lower stages—the practice of pharmacy and the administration of mineral waters. The latter is the most imminent, and its prospect has excited much discontent in Medical circles. It may not be generally known to our readers that at Vichy and other resorts for drinking mineral waters in France, there is a class of salaried officials, the Medical Inspectors of Mineral Waters, whose authorisation is necessary to enable persons to drink the waters, the object being to secure the employment of these medicinal agents in suitable cases. These inspectors being also Practitioners, their appointment has often given rise to heart-burnings and jealousies. It is now proposed to abolish the office; but the idea is met with strong reprobation on the part of some of the organs of the Medical press, upon the ground that for the due employment of an active medicinal agent, the abuse of which may be followed by the most mischievous and dangerous consequences, it is absolutely necessary that the preliminary diagnosis and indications should be well assured, and the use of the substance properly regulated. M. Pidoux, the President of the Paris Medical Hydrology Society, in his opening address of the present session, expressed similar sentiments. For our own part, we cannot see why mineral waters should be dealt with differently to other medicinal agents. None of these should be taken except under competent advice; and there must be many objections to the forced intervention of an official personage between the patient and his ordinary adviser.

The question of the consequences resulting from marriages of consanguinity, so much debated of late both in England and France, has entered into somewhat an official phase in the latter country. The Minister of Agriculture, Commerce, and Public Works has issued the following circular to the various prefects :—

"Sir,—The question so warmly debated in learned bodies as to the influence of marriages of consanguinity upon the physical aptitudes of the generations which are the result of these, gives, quite a special importance to the indications which the table of the annual movement of the population should furnish me with respect to the number of marriages. Now, information derived from trustworthy sources authorises me to believe that these indications are remarkably incomplete as regards marriages between cousins-german. Omissions of this kind are very easily explained when we bear in mind that the marriages in question not being, as are those contracted between brothers-in-law and sisters-in-law, uncles and nieces, aunts and nephews, the object of legal prohibition, the local authorities have no regular means of recognising them. I beg of you, then, to issue special instructions inviting the mayors to make direct inquiries in the case of all future marriages, when the papers laid before them do not contain the necessary information, whether the parties are related in the degree of cousins-german or even of cousins, the issue of cousins-german."

New Appointments in Paris.—M. Baillon has been appointed Professor of Medical Natural History in the Faculty of Medicine in place of the late M. Moquin-Tandon; M. Gratiolet has been appointed Professor of Anatomy, Comparative Physiology and Zoology in the Faculty of Sciences, in the place of the late Isidore Geoffroy St. Hilaire; and M. Jamin Professor of Physics in the same Faculty, in place of the late M. Despretz.

REVIEWS.

Not Like Man Bimanous and Biped, nor yet Quadrumanous, but Cheiropodous. By George Britton Halford, M.D., Professor of Anatomy, Physiology, and Pathology, in the University of Melbourne. 8vo. Melbourne. 1863.

In a recent editorial article we commented on the lecture by Dr. Halford, the anatomical arguments of which are here reproduced. The object of the pamphlet is to give a detailed account of dissections in which he investigated the structure of the brain, hand, and foot of the *Macaci*, and compared them with the homologous structures in man. The result of Dr. Halford's dissections have led him to propose, as an original epithet distinctive of the pedal characters of the monkey, the term "Cheiropodous," or, as he translates it, "finger-footed." This word was originally applied by Mr. Ogilby, the eminent zoologist, to a large group of mammals,—a fact to which Dr. Halford does not allude. Leaving, however, his terminology for his dissections, the great new statement which he brings forward is, that in Professor Huxley's "Man's Place in Nature" "the existence of the *extensor ossis metatarsi pollicis* is not alluded to; it is not present in the leg of man, and is essentially a muscle of a thumb, and not of a great toe." Dr. Halford gives a figure of a dissection of the leg of Macacus. He points out a distinction between this muscle and the *tibialis anticus*, which latter, he says, is "inserted into the internal and plantar aspect of the internal cuneiform bone;" the tendon of his *extensor ossis metatarsi pollicis* being, according to him, "inserted into the inner side of the base of the metatarsal bone of the thumb." In a reply to Dr. Halford, which we have seen from the pen of Mr. W. Thomson, of Melbourne, these two muscles are pointed out to be merely the counterpart of the *tibialis anticus* in man; and Mr. Thomson imputes (page 7) to Dr. Halford ignorance of the elementary fact that the *tibialis anticus* in man has two insertions,—one into the inner side of the entocuneiform, one into the base of the first metatarsal. The "small slip of tendon which in man normally passes on to the metatarsal of the great toe," (a) is the homologue of the *extensor ossis metatarsi pollicis* of Dr. Halford. This gentleman, in bringing forward his argument with respect to this peculiar muscle, makes not the smallest reference to the bibliography of the subject, and the testimony of Duvernoy, (b) Owen, (c) and Church as to the dissections of the gorilla, chimpanzee, oran-ûtan, magot, and sapajou monkey, are not in the slightest way alluded to. None of these authors will, we are confident, wish to rob Dr. Halford of the entire credit attached to his discovery.

The most accurate text-books have placed the anthropotomical question beyond doubt; and whilst referring our readers to their Quain, Holden, Ellis, and Gray, we will quote the lucid definition from the latest compendium in Germany by Professor Eckhard, "Lehrbuch der Anatomie des Menschen." Speaking of the *tibialis anticus* he says:—"Nachdem er auf den Fuss getreten ist, geht er ganz nach dem innern Rande Desselben und heftet sich dann schliesslich an der *basis ossis metatarsi hallucis* und dem *os cuneiforme primum* an."—P. 138.

If Dr. Halford was, as Mr. Thomson charges him, ignorant of this double insertion in man, the demonstration of the fact annihilates his argument as far as regards its accuracy, whilst the proof of the double insertion in the apes has been long familiar to zoologists. His argument is therefore neither true nor new.

Dr. Halford states that in the *Macacus*, when we examine the pedal extremity, "we have now lost all trace of a foot, and have before us the bones and muscles of a hand; and, to render this homology complete, no *Transversus Pedis*. . . . exists in *Macaque*." This was originally pointed out by Tyson, and copied by nearly every writer on the anatomy of apes since his time. On its value as an anatomical character of differentiation we shall not offer any observations.

Many irrelevant matters relating to the origin of man are alluded to in the controversy, to which we shall not here make reference, as the subjective relations of the muscles in the ape are alone the legitimate topic of discussion. The introduction, by Mr. Thomson, of subjects which have no immediate relation to purely anatomical facts, and which are wholly unintelligible to scientific men in the mother country, we consider much calculated to complicate the subject, and whatever may be the nature of the error into which Dr. Halford may have been led, the tone of invective which has been adopted in the controversy deserves our most strenuous reprobation.

PROVINCIAL CORRESPONDENCE.

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LIVERPOOL.

November 23.

The two months which have passed since the date of my last letter to you have not been marked by any improvement in the health of the town. We are still infested with typhus, and though it cannot be said to exist to such an extent as to constitute an epidemic, it is still far above its ordinary standard. Last week (*i.e.*, that ending November 14) the deaths from this cause were thirty-two, or twenty-one above the average. I truly regret to say that, since my last letter, three of our own Profession have fallen victims to this disease. Two of them, Mr. Sayer and Mr. Swift, were district Medical officers of this parish, and, doubtless, were attacked by the infection in their visits to the miserable dwellings of the poor, where the disease gains its most deadly intensity. The third, Mr. Padfield, had but very recently been appointed House-Surgeon to the Northern Hospital, into which cases of fever are not admitted. It has been supposed that he may have received the infection from a patient who had just come from a house in which two children had died from fever. It unfortunately happened that Mr. Padfield was occupied for a considerable time in passing a catheter through some obstruction in this man's urethra, and it is suggested that he may, during this time, have become affected by the fever poison.

The Medical Officer of Health submitted to the Health Committee last Thursday a proposal thoroughly good and sensible, but sure to encounter a vigorous opposition. He suggests that, in all cases in which privies communicate with tunnels conveying night soil, they shall be converted into water-closets. This will, if carried into effect, hinder the fœtid effluvia from the tunnels finding the easy access which it now does into dwelling-houses. It is remarkable that this abominable arrangement of privies, which constitute ventilating-shafts for tunnels, is not confined to the habitations of the worst class, but exists in some much above this order of houses.

The most execrable of our still remaining nuisances are the "middens" of the courts, which, as Dr. Trench says "saturate the houses of the poor residents with pestilential vapours." The quality of these vapours may be gathered from the fact that "one inspector describing to the Medical Officer of Health the accident by which two men who incautiously opened a midden in Cashier-place, Mann-street, were asphyxiated by the mephitic gases, added that narrow escapes from similar fates are of frequent, almost nightly occurrence." Dr. Trench proposes to supplant these filthy receptacles by the introduction of "trough water-closets," *i.e.*, oblong troughs of stone or iron which can accommodate two or more conveniences, and which can be kept in order by simply opening a couple of valves, which allow the exit and entrance of the water once in twenty-four hours. The machinery for this is in a locked recess, and the opening of the valves would be attended to daily by the scavenger in charge of the district. One of these has been tried since October 24 in No. 3 Court, Hotham-street, and with complete success.

The proceedings of the Medical Society for this Session were inaugurated on October 1 by an address by Mr. Steele, one of the retiring Vice-Presidents. The same evening Mr. Bickerton showed a foot removed at the ankle-joint from a railway porter. It had been crushed by the wheel of a railway-carriage, and illustrated the effects of an accident that Mr. Bickerton stated he found of common occurrence in consequence of the careless way in which porters, guards, etc., get off carriages while they are in motion. At the meeting of October 13 there were some curious facts elicited as to the effects of the bites of flies. Mr. Hakes referred to a circular of the French Government to the Prefects of Departments concerning poisonous flies, and mentioned a case in his own practice in which a lady had suffered from severe inflammation following a "bite" or "sting" from what appeared to be only a common fly. Cases of a somewhat similar character had been recently seen by Dr. Barrett, Mr. Bailey, and Dr. Skinner.

(a) Ellis, "Demonstrations of Anatomy," p. 754. Church, "Myology of Orang," in *Nat. Hist. Rev.* 1862. P. 88.
(b) Duvernoy, "Archives du Muséum," vol. viii.
(c) Owen, *Proc. Zool. Soc.*, 1830-31, p. 70.

A specimen of much interest in connexion with excision of the knee-joint was shown by Dr. Nottingham. It showed the patella excavated by caries so as to leave it a mere shell, while the ends of the femur and tibia were comparatively sound. At the same meeting Mr. Hakes showed a bladder, connected with which were two diverticula; a larger, capable of holding more fluid than the bladder itself, and a smaller one, evidently of more recent date, near the neck of the bladder. The patient had been admitted into the Northern Hospital on account of the great irritability of his bladder. A stone was detected, and after gradually dilating the urethra lithotrity was performed. The patient, however, died ten days after the operation, some few fragments of the stone having passed by the urethra.

Post-mortem.—The bladder was found generally hypertrophied, and its mucous membrane slightly inflamed. Two considerable sized pieces of stone were found still in the bladder, a small fragment only in the diverticulum.

Mr. Lowndes read the case of a man, aged 29, whose knee-joint had been laid open by the blow of a winch handle, which had made a ragged wound an inch in length on the outer side of the ligament of the patella. Synovial fluid escaped from the wound, and a probe passed through it at once into the joint. The wound was dressed with a double layer of lint, thickly smeared with Canada balsam. The limb was placed on Macintyre's splint, and he was ordered ½ gr. of morphia night and morning. His admission took place on September 8. On October 5 the original dressing was removed; the wound was found completely healed. On October 9 he went home free from pain, and able to walk without a stick.

At the meeting of October 29, a case was mentioned by Mr. Hakes of a gentleman who was admitted into the Northern Hospital with fracture of one femur and dislocation of the other on to the dorsum of the ilium, and fractured ribs. Chloroform was given, and the House-Surgeon proceeded to reduce the dislocation; the head of the bone, however, slipped back into the ischiatic notch, and unfortunately just afterwards the patient appeared to be in some danger from the effects of the chloroform, so that nothing further was then attempted. The same afternoon, however, the patient was again put under the influence of chloroform, the bone was dislodged from its position, but slipped back again; continuing the traction, however, it was again removed from the notch, and readily returned to its natural position.

At the same meeting Dr. Turnbull gave an account of a case of hydrophobia, which had been under his care at the Royal Infirmary. A man, aged 19, was admitted on October 19. Three days before he had complained of difficulty in swallowing fluids. When Dr. Turnbull saw him he was sitting in bed, leaning forward, breathing with difficulty, his pulse 140. He drank some water, but spit out the greater part, and then brought up a quantity of frothy mucus. Dr. Turnbull ordered him an antispasmodic mixture of chloroform if necessary. In the afternoon he became very excited, tried to bite, and brought up a great deal of saliva. Chloroform was given for about forty minutes. The patient was never completely under its influence, but it seemed somewhat to interfere with the breathing Great congestion of the head also came on; ice was applied, and some blood drawn from the temporal artery. He became quieter afterwards, but died at 5 p.m. on the day of his admission.

Post-mortem.—There was not found anything noticeable, excepting a slight mark near the lip, at a spot where, it was stated, he had been bitten by a dog two months previously.

An important paper was read by Dr. Nottingham, of the Southern Hospital, on "Tumours of the Thigh and Knee," with special reference to the occasional difficulty of diagnosis between fungoid and other forms of disease in these regions. The limited space at my disposal renders it impossible for me even to attempt an abstract of this paper, which may, I hope, be made public in another form.

A case of perforating wound of the head by a poker was reported on November 12. A drunken woman came to the Infirmary about two months since with a slight scalp wound. It was dressed with lint and cold water, and she was ordered to come back the next day. Instead of doing this she continued to drink hard for several days, when she was brought in with a pulse of 150, suffering from rigors, convulsions, and low-muttering delirium. Mr. Bickersteth made a crucial incision, which disclosed a perforation in the skull, from which a fœtid, ichorous discharge issued. The wound was situated about an inch below the left parietal eminence. She never recovered from her insensibility.

Post-mortem.—The dura mater was adherent to the bone and to the brain; an abscess in the cerebral substance communicated with the left ventricle. The blow had been inflicted by her husband with an old worn tapering poker, and a comparison of this weapon with the size of the wound in the skull proved that it must have penetrated to the extent of an inch and a-half.

Another specimen from a fatal injury to the head was shown by Mr. Lowndes from a man who had received a blow from a glass tumbler in some quarrel at a brothel. The man went on drinking for a week, was then admitted in a violently delirious state into the Northern Hospital, where he died. During life nothing more than a mere fissure could be detected in the skull, but after death a considerable starred depression of the internal table was found.

Mr. Bailey brought forward a case in which a child, aged two years, had drunk some extract of belladonna dissolved in water. The child was delirious, muttering, grasping at imaginary objects, bringing his closed fist to his mouth, and champing his teeth as if eating; he would remain quiet for a few minutes, after which he would start up with a shriek, his extremities stiffened, and a sort of opisthotonos came on. There was subsultus tendinum; the pupils were dilated and insensible; the face was engorged, the skin red and hot. An emetic of carbonate of ammonia and a warm bath relieved the child very much; in two hours he fell asleep, and when seen next day was quite well.

Many other matters of interest I am compelled to omit for fear of trespassing too much on your space.

GENERAL CORRESPONDENCE.

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THE RECENT CASE OF POISONING BY ACONITE.

LETTER FROM DR. G. PUCKLE.

[To the Editor of the Medical Times and Gazette.]

SIR,—I send you the following particulars respecting the recent case of poisoning by aconite:—

The period that elapsed from the time Hunt was believed to have taken the poison until his death, was nearly an hour and three-quarters. He no doubt vomited a considerable portion almost directly, as I afterwards administered a large teaspoonful of this vomit to a full-grown cat with the following effect:—It was soon seized with convulsive movements, it vomited twice, and at the end of ten minutes, on attempting to walk, the hind legs were unable to support the body, and it dropt repeatedly; at the end of about an hour the cat recovered.

Most of Hunt's symptoms have been already described, but about a quarter of an hour before his death he entirely lost all power in his limbs, and there was complete anæsthesia to the sharpest pinches about his arms and legs, but a dash of cold water on the face caused a short, sharp shriek. The post-mortem appearances have been properly described, but my evidence in one or two respects has been incorrectly reported. In the first place, I stated that the whole of the contents of the stomach, with the exception of a small portion submitted to examination by a solution of bichromate of potash and sulphuric acid, which showed the presence of *alcohol* not *aconite*, was transferred to a water bath and concentrated in the usual way, afterwards an ounce of alcohol was added to the extract and warmed, then strained, and the alcoholic extract concentrated to a very small bulk, and the usual test applied, viz., a drop placed on the tongue produced tingling sensation and partial numbness. This administered to a cat produced symptoms similar to the vomited matter, but in a less degree.

I next treated some of the first vomited matter in the same way; the concentrated alcoholic extract obtained produced very decided tingling and numbness of the tongue, which lasted for two hours, altogether in a much more marked degree than the extract from the contents of the stomach.

From these results I arrived at the conclusion that the first vomited matter contained the largest amount of the poison.

In reply to a question from Dr. Lankester, I stated that the only decided evidence from the analysis of the presence of the poison was the physiological test described, and in reply to a question from the coroner, I stated that one-fiftieth of a grain of the active principle aconitina would kill a small animal, and had nearly proved fatal to an elderly lady according to Dr. Taylor; that ten minims of a strong tincture, such as that taken by Hunt, might probably destroy life, as it was much stronger (as proved by comparison) than the ordinary Pharmacopœial tincture, fifteen minims of which has been known to produce death. I am, &c.

Denmark-hill, S., November 26. GEORGE PUCKLE.

⁂ We have great pleasure in giving immediate insertion to Dr. Puckle's letter. Our remarks on his evidence were founded on the report which appeared in the *Times* newspaper. It will be seen from Dr. Puckle's statement that in several important particulars that report was incorrect.

REPORTS OF SOCIETIES.

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THE PATHOLOGICAL SOCIETY.

TUESDAY, NOVEMBER 17.

Mr. PRESCOTT HEWETT in the Chair.

Mr. PARTRIDGE showed a child born with

MALFORMATION OF THE GENITALS.

There was a split scrotum, on one side a hernia, and on each a testis. There was a small imperforate penis, the urethra being situated at its base.

Mr. BRODHURST believed the child was a female, and in this opinion Dr. Playfair and Mr. Thomas Smith concurred. Mr. Partridge and Mr. Fergusson believed the child to be a male. Mr. Fergusson alluded to Mr. Durham's researches on the subject of hermaphroditism, and suggested that his opinion should be obtained.

Mr. HOLMES showed a specimen of

FATTY HEART.

A few weeks ago a patient died under the influence of chloroform, a very small quantity having been given. The heart was quite healthy. Soon after a patient was operated on, and was kept under chloroform for some time. This patient recovered from it, lived nine days, and then died suddenly. The heart was found after death to be very fatty. The interest of the case was this, that a small quantity killed a man whose heart was healthy and a large quantity did not kill a man who had fatty degeneration of that organ.

Dr. JOHNSON then showed a specimen of

ANEURISM OF THE ARCH OF THE AORTA, IN WHICH THERE HAD BEEN LARYNGEAL SYMPTOMS.

Laryngeal dyspnœa was the most urgent symptom, and yet the laryngoscope demonstrated that the larynx was healthy. There were no physical signs of aneurism on admission, but the diagnosis made was that of pressure on the recurrent laryngeal nerve by an aneurism. Four days later hæmoptysis came on, and abnormal dulness was found over the sternum. The patient died, and an aneurism of the arch of the aorta was found.

Mr. HENRY THOMPSON exhibited a

HAIR-PIN EXTRACTED ENTIRE FROM THE MALE BLADDER BY THE LITHOTRITE,

which he had removed under the following circumstances:—A few weeks ago he was requested by Mr. Dunn, of Surrey-street, Strand, to see an elderly gentleman with a hair-pin in his urethra, which had been introduced that morning. On examining him he found, at about four or five inches from the external meatus, the two points of the pin imbedded in the mucous membrane, the bent end being at the neck of the bladder. He attempted to cut it in two at the bend, and so extract the two pieces separately, for it was impossible to draw it outwards in its present position. This, however, could not be accomplished at so great a depth. It was decided, therefore, to make an incision in the perineum, as in median lithotomy, and extract it there. All was arranged, several gentlemen being present. Mr. Thompson passed the staff, and was conscious that the hair-pin had receded into the bladder. He therefore withdrew the staff, and introduced a flat-bladed lithotrite, with the view of extracting the pin if possible. After two or three trials he succeeded in catching the extremity of one of the prongs in the blades; then, straightening it out gradually at the neck of the bladder, he withdrew it in an almost straight line through the urethra. It measured five inches and a-quarter in length. There was no bleeding, and no symptoms of any kind followed. The patient walked out in the evening, and went to his business as usual two days after. Mr. Thompson was not aware of a similar instance on record in relation to the male bladder, although by no means uncommon in the female.

Mr. BARNARD HOLT said that he had had such a case under his care; the pin was about five inches down the urethra, he seized one end with a pair of forceps, the other passed through the penis, but the whole was extracted by the author without any ill consequences following.

Mr. PARTRIDGE said that a gentleman passed a probe into his urethra and it slipped out of his reach. It was in the country, and he (Mr. Partridge) had no forceps; he therefore thrust the lower end of the probe through the urethra, and pulled it out by this artificial opening. No ill consequence followed.

Dr. JULIUS POLLOCK showed a specimen of

SINGLE KIDNEY.

Such a specimen, he said, was not very rare, but it was the only one he had met with as pathologist at King's College Hospital for three years. There was only one large kidney; the other was looked for, but was positively absent. There was no ureter.

At a previous meeting, Mr. HINTON exhibited a case of

PERFORATION OF THE MEMBRANA TYMPANI.

It was taken from a man who died in Guy's Hospital, from empyema following injury. The perforation is of old standing, and presents the usual appearance, except that it is situated quite at the upper part of the membrane. The long process of the incus and the stapes are exposed, and they are seen to be firmly united. There is diminished motion of the ossicula. The specimen showed also a thickening of the superior wall of the tympanum as compared with that of the opposite bone; probably exhibiting a process by which inflammation within the tympanum is prevented in some cases from spreading to the parts within the skull. The mode of application of the artificial membrana tympani was also shown.

SPINAL ARACHNITIS, THE RESULT OF DISEASE OF THE CERVICAL VERTEBRÆ AND INTERVERTEBRAL CARTILAGES, IN AN INSANE WOMAN WHO HAD ATTEMPTED SUICIDE BY CUTTING THE THROAT.

Dr. Ogle was indebted for the history of the case to Dr. Boyd, of the Somerset Lunatic Asylum. It was that of a woman, aged 52, who, in making the suicidal wound with a razor, had not only divided the larynx, but also the œsophagus to a considerable extent. She was kept alive by nutritious injections, passed through an œsophageal tube thrice a-day for three weeks. During that time the wound contracted to half its original size, and she went on well until two days before death, when she became delirious. No spasm or convulsion, however, of any kind occurred before death, and one hour before that event took place the patient was fed as usual and answered questions rationally. After death it was found that not only had the razor divided the larynx and œsophagus, but that inflammation had been set up behind the pharynx and œsophagus, and that a carious condition of the anterior surfaces of the cervical vertebræ, and softening, with perforation, of the intervertebral cartilage, had been set up, so that a probe could readily be passed through one part of an intervertebral cartilage into the spinal canal. On examining the latter it was found that the dura mater at the upper part of the cervical region was thick and shreddy, and that the spinal arachnoid cavity throughout its whole length contained a large quantity of purulent and fibrinous material. It was also found, on examining the cranium, that the purulent fluid had found its way upwards, and covered the arachnoid situated over one of the lobes of the cerebellum. The brain and its membranes were very congested. The spinal cord was healthy. Dr. Ogle recalled the attention of the Society to a somewhat analogous case which he exhibited to the Society in the session of 1852-53,(a) in which a piece of bone became, in the act of swallowing, impacted in the œsophagus, set up inflammation, and eventually stricture of that tube; and also set up inflammation, softening, and perforation of an intervertebral cartilage, by which means inflammation was, as it were, conducted backwards to the intervertebral canal, and arachnitis, with disease of the spinal cord, originated.

(a) Vol. iv. of the *Transactions*, p. 27.

CASE OF ARREST OF THE CIRCULATION IN ALL THE MAIN ARTERIAL BRANCHES OF BOTH ARMS AND LEGS—SEPARATION OF THE LAST PHALANX OF TWO OF THE FINGERS FOLLOWING ULCERATION OF THE FLESHY PARTS OF ALL THE FINGERS, AND LOSS OF THE NAILS.

The patient was a man, aged 35, who had been an out-patient at St. George's Hospital since November, 1861. Some eight or ten years previously he had been the subject, during one night, of some kind of a "fit," as he described it, (which he thought was owing to his intemperance in drinking,) during which he did not lose his senses, but experienced a darting sensation down the right side. This was followed by an affection of the sight, all objects appearing, as he described it, "to shake about;" and this symptom had continued ever since. Eight months before his application as an out-patient, he became affected by giddiness, and numbness of the left side, and especially of the hand (which was very painful). When first seen as a patient both the eye-balls were at once noticeable as oscillating or rocking from side to side, partially rotating on their antero-posterior axes, and he was complaining of numbness of the left side of the face and of the tongue, and also of the left leg and foot. He protested that he never had syphilis, and the urine was at that time free from albumen, as also from traces of sugar.(b) Subsequently it was stated that there was always much pain during cold weather in the left arm and hand, and the left arm was much thinner than the opposite one. There had been no complaint of headache, spasmodic action, or vomiting, etc. Subsequently, the pulse was found to be wanting in all the vessels of the left arm, and the tips of the fingers of the left hand began to ulcerate. Later on, the pulse in the right arm was found absent, and afterwards the nails of the left fingers all died away and exfoliated. Still later, the last phalanx of the middle and little fingers of the left hand entirely came away; the ends of the fingers of the right hand also becoming painful and numb. At one time, later on, there was slight ptosis of the left upper eyelid, and some protrusion of the left eyeball. During the entire illness nothing wrong about the heart could be discovered by the stethoscope, but at one time slight hæmoptysis occurred, and the respiratory murmur was found defective at the upper part of the lungs behind. Later on it was found that, except in the femoral arteries for about one inch below Poupart's ligament, and in the "arteria dorsalis pedis," no artery of either leg had pulsation. The great toe on both feet at one time also "festered" around the nails. When last examined there was no pulsation in any blood-vessel of either arm, and none in the left subclavian artery. There was slight pulsation in the right subclavian artery, and free pulsation in both carotids and temporals. The brachial artery of the left arm could be felt at its lower part firm and hard, but not pulsating. Feeble pulsation existed in the femorals immediately below Poupart's ligament, but none in either popliteal space.

Dr. Ogle had his patient at the Society for examination by its various members, and exhibited a drawing of the hand with the nails ulcerating off, and also the phalanges of the fingers which had come away.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 24.

Mr. Partridge, President, in the Chair.

A paper, by Dr. W. Ogle, was read on a

SUPPOSED ABDOMINAL TUMOUR, BEING A STICK, TEN INCHES LONG, WHICH HAD BEEN INTRODUCED INTO THE BOWEL FOUR MONTHS PREVIOUSLY, PER ANUM.

A lad, aged seventeen years, came under the care of Dr. Ogle, suffering from a tumour of the size of a pigeon's egg, just below the cartilages of the right ribs. It was stated to have been first perceived four months previously, when there were abdominal pain and jaundice. The nature of the "tumour," owing to the lad's reticence, was not diagnosed, but after being sixteen days in the Hospital, he passed a stick from the bowels ten inches long, and it was only after much cross-questioning that he was now induced to confess that he had himself introduced it per anum. The peculiarity of the case consists partly in the moral obliquity of the youth, and partly in the fact of the stick having been introduced so high up into the bowel as to be quite across the abdomen.

Mr. Partridge said that the case would have been less remarkable had it occurred in the person of a woman. Hysterical girls were in the habit of passing substances into the rectum and vagina, and then denying all knowledge of the manner in which they had been introduced. He related a case in which a girl had passed the end of a jelly-shape into the vagina, and which was encrusted with calculous deposit. It was removed with some difficulty.

Mr. George Cooper said it was a common practice in schools for boys suffering from flatus or irritation of the rectum to pass pieces of wood into the bowel to obtain relief. He referred to the case of an elderly insane lady, in whom the bony part of an enema syringe had been detached in the rectum, and was removed with great difficulty.

Mr. Barwell said the moral of the case was simple: that in all cases of tumour in the abdomen of any standing, an examination of the rectum should be instituted. In this case, if such an examination had been made, it would have terminated earlier.

A paper, by Mr. Henry Thompson, was read on a

CASE OF UNUSUAL DIFFICULTY IN LITHOTOMY ARISING FROM GREAT DISTORTION OF THE PELVIS BY RICKETS.

In this case there was very considerable obstruction to the removal of a stone from the bladder arising from the pelvis being extremely narrowed and deformed by rickets. The author is not aware of any similar case in the records of lithotomy. G. S., aged fours years and a half, was first seen by Mr. Thompson, August 20, 1863. The symptoms of stone were severe. The child was much emaciated. A cicatrix existed in the perineum, with a fistulous opening, showing the site of a median operation for stone performed by Mr. Erichsen about ten weeks before, on which occasion several portions of the outer layers were removed. The stone was grasped, but the forceps could not be removed with it; and owing to the condition of the child it was deemed at that time prudent to desist, and postpone the attempt. The wound healed kindly up to a fistulous aperture, but diarrhœa came on, and the child left the Hospital to recruit its strength. At the time of its readmission, Mr. Erichsen, being from home, authorised Mr. Thompson to do what he considered necessary with the case. The sound passed easily into the bladder, and a large stone was detected. The child was admitted into University College Hospital August 31, and was placed on the operating table September 2. Mr. Thompson made his incisions in the old track, and, introducing his finger, recognised the sacral promontory as remarkably prominent; beyond this the finger passed with difficulty, flatwise, and touched the end of a stone lying in the bladder, which was altogether in the abdomen. There was no room to pass lithotomy forceps up by the finger. Finding, then, by placing the right hand on the abdomen, that the stone was easily felt there, and could be pushed down to the upper outlet of the pelvis, Mr. Thompson directed his assistant to maintain it firmly there by pressure, while, with a slender-bladed polypus forceps, he extracted the stone with some difficulty entire. There was no bleeding of any consequence. Peritonitis set in next day, and proved fatal in three days. At the post-mortem the pelvis was removed: this was exhibited to the Society. The deformity was very remarkable. In the dried bone, when the soft parts were taken away, only sufficient room existed for the stone to pass through in its long axis, the dimensions of the outlet only just exceeding the smallest diameter of the stone. The upper opening of the pelvis is obliquely caudate; the sacral promontory being within ⅛ in. from the left pubic ramus, and barely ⅜ in. from the right; from the pubic symphysis it is nearly ⅞ in. The stone is hard uric acid, of a flattish oval form. It is 1⅛ in. in length, ⅞ in. in breadth, and ⅜ in. in thickness.

The President inquired whether, previous to operating, Mr. Thompson had examined the condition of the pelvis per rectum to ascertain its condition.

(b) The urine had recently contained mucus, or pus-globules, and a very slight trace of albumen.

Mr. William Adams observed that he had examined the pelvis of this child now exhibited to the Society, and had no hesitation in pronouncing it to be a well-marked case of true rachitic distortion. He believed the deformity to be much greater than would generally be found, even in a severe case of rickets, at the age of four years and a-half. He had generally regarded the pelvic deformity as a late event in rickets, and produced by mechanical causes, such as the weight of the body telling from above directly on the pelvis, and resisted below by the thigh-bones. The ilia are thus made to fold upon themselves, and the sacrum advanced forwards towards the symphysis pubis. He suggested that an accurate description of the external characters of the child, as to its development, and the amount of rachitic distortion, would have been a valuable addition to the paper, and considered that where general rachitis was indicated by stunted growth and distortion of the upper and lower extremities, a very small and distorted pelvis might confidently be diagnosed by the Surgeon, though it would probably not be found to the extent exhibited in the present specimen at so young an age. Such a diagnosis would be useful before performing the operation of lithotomy.

Mr. Shaw was not sure that the views put forth by him on rickets, in the Society's *Transactions*, threw light on the present case. He thought that the narrowness of the pelvis, from which the difficulties in the extraction of the stone proceeded, might be accounted for by the deformity alone. In the papers alluded to he had endeavoured to show that contraction of the pelvic canal was to be looked for, in adults affected during childhood by rickets, from a cause quite independent of softening and distortion—namely, impaired development of the pelvis, in common with the body generally, from defective growth. It is known that in the interval between infancy and adolescence an important change is wrought in the proportions of the human figure. Whereas in childhood the superior division is large and heavy, and the lower small and light, it is the reverse in the adult; at mature age the superior division is small and light, and the inferior large and powerful. The explanation is, that the configuration of the infant relates to the act of parturition; the pelvis is diminutive, that it may not present an obstacle to the speedy delivery of the umbilical cord after the orifice of the womb has been dilated by the passage of the head. The configuration of the adult, on the other hand, has relation to his carrying his body erect: whence the wide and strongly-built pelvis, adapted also for the peculiar mode of delivery in women. Accordingly, in the revolution thus effected, no part undergoes such a great proportionate increase of size as the pelvis. But one of the properties of rickets is to arrest or retard the growth. Now, by doing so it not only causes the body to be generally diminutive, but it interrupts the process of metamorphosis just described. Hence the skeleton fails to possess at adolescence its proper proportions; it has stamped upon it, more or less distinctly, those of the fœtus. And as one of the most characteristic features of the child's skeleton is the relative smallness of the pelvis, the disproportionately small pelvis is a distinguishing mark of the adult rickety skeleton. That diminution of size, therefore, is a cause of narrowness in the pelvic canal, additional to, and independent of, the contraction from softening of the bones and deformity. In a case, which he recorded, of a female affected with rickets, and not particularly below the average stature, it was necessary to perform embryotomy for the removal of the child at the full period. She died from the violence. On examination of the pelvis after death, it was found preternaturally small in all its dimensions, but the deformity was of such a trifling kind that it was scarcely observable; and the conclusion was drawn that the difficulty in the delivery was to be ascribed almost exclusively to the narrowness of the canal, resulting from defective development. In reference to the case under discussion, it is not improbable that some part of the diminution of size in the pelvis was owing to the arrest of growth; but as it had not been ascertained how long the disease had lasted before the operation, no satisfactory opinion could be formed on that head.

Mr. Erichsen observed that when the child first came under his care it suffered from rickets to a marked extent. The tibiæ were curved, the ankles enlarged, the growth stunted, the abdomen tumid, and the head large. He did not wish to operate; but the sufferings of the child were great, and, knowing nothing of the previous history of the case, and having never heard that such a cause of difficulty had presented itself, he had no suspicion of the distortion of the pelvis. He performed the median operation, as that was likely to be attended with the least loss of blood. Mr. Erichsen then referred to the difficulties he had encountered in the operation, the almost impossibility of reaching the stone, and his complete inability to remove it. He thought, at first, that this might result from a sort of hour-glass contraction of the bladder; at all events, the opening from the pelvis was so narrow that he could not succeed in removing the stone.

Mr. Henry Lee thought that Mr. Thompson's operation had been particularly fortunate, as it was only when the stone was in a perpendicular direction that it could pass through the opening in the bones.

Mr. Barwell remarked that he differed in opinion from Mr. Adams as to the pathology of rickets. He (Mr. Barwell) had come to the conclusion that changes in the pelvis were not delayed after the deformation of the femur; in fact, since the one set of alterations was in many points compensatory of the other, the two concur. The outward bend of the upper part of the femur, the decreased angle at the neck, and the twist of the bone upon itself, caused the axis of the head, which ought to be transverse, to look too much forwards and too much downwards. To obviate the inconveniences and dangers of this false relationship between femur and pelvis, the latter changes its position; hence the sacrum becomes horizontal, and the lumbar spine bends *pari passu* with every alteration in the femur. The changes in shape as well as in position of the pelvis were also consentaneous with those in the thigh; but they were less easy to detect in the short curves and complicated shape of the one bone than in the long sweeps and simple outline of the other; hence they were observed later, and therefore were generally believed to occur later. These latter alterations being produced by the same agencies which deform the thighs—namely, weight and muscular action—it was therefore, even from *à priori* reasons, probable that the two would undergo simultaneous and co-ordinate, though not of necessity equal, changes. In looking at the pelvis handed round, Mr. Barwell had been struck by the evidence of the effects of weight; and he believed that this child must have been put upon the feet very early, and while the bones were very soft, even for a rickety case. Some two years ago he had made an interesting dissection of a rickety child whose left lower limb was paralysed; but the boy had managed to get about with the right leg and his arms. At the examination it was found that the right side of the pelvis was distorted, being pressed inwards at the acetabulum; on the left side the bones were normal in shape, as far as could be judged by the eye.

Mr. T. Smith related a case that occurred to him at the Children's Hospital, in which he performed lithotomy on a rickety child two years of age. He examined the pelvis per rectum, but could not detect any deformity whatever. The removal of the stone was not attended with any remarkable difficulty.

Mr. Holt remarked that from all he could gather, it would appear that the present case occurred in an acknowledged rickety, unhealthy child, upon whom the median operation of lithotomy had been previously performed by the author's colleague, a gentleman of known skill and ability, without, however, the calculus having been removed. And the explanation given was that the impediment to its removal appeared to be more due to some osseous obstruction than to any want of space occasioned by the condition of the soft parts, for Mr. Erichsen was enabled to seize the stone with the forceps, and likewise to encircle it with the scoop, but could not remove it. Mr. Holt believed the operation performed in the first instance by Mr. Erichsen was the right one: it was an operation by which calculi of large size could be removed, and he had performed it upon many occasions, both in the child and in the adult, without experiencing any difficulty; and had there not been some unusual condition of the bones, Mr. Erichsen would have easily completed the operation. Mr. Holt could not endorse Mr. Erichsen's opinion that an hour-glass contraction of the bladder would prevent the extraction of the stone after it had been once seized with the forceps, neither did he consider an ordinary examination by the rectum would have revealed the diminished aperture of the brim of the pelvis; but if care had been taken to ascertain the situation of the point of the sound when the stone was struck, it would at once have shown the high situation of the bladder, as well as the position of the stone; for although, as is well known, the bladder in the child is situated much higher than in the adult, yet such an examination would have at once declared the position of the bladder, and that the stone could be felt above the pubes. With such a history, the failure of the previous operation, and the explanation given by Mr. Erichsen, Mr. Holt was desirous of asking Mr. Thompson why he repeated Mr. Erichsen's operation in preference to performing the supra-pubic one?

Dr. Tyler Smith, after examining the pelvis which was exhibited to the members, remarked that in cases of rickets in pregnant women it was usual to make a careful examination of the pelvis. The case before the Society illustrated the importance of instituting a similar examination in cases where lithotomy had to be performed in a rickety patient. An examination in this case per rectum would have enabled the Surgeon to determine the exact dimensions of the pelvis with as much ease as the accoucheur could attain a knowledge of the dimensions of the pelvis in the case of a pregnant woman by making an examination per vaginam. In Mr. Thompson's patient the finger passed in the rectum could have reached any part of the pelvis.

Mr. Hulke mentioned the case of a child upon whom he had operated at the Middlesex Hospital. The patient was a dwarf, rickety, and had a very narrow pelvic outlet. He experienced no particular difficulty in the removal of the stone, but at the time had made a memorandum on the subject of the peculiarity which had presented itself.

Mr. Forster inquired why in the first operation an attempt had not been made to crush the stone? As Mr. Thompson might have failed as did Mr. Erichsen, he would also ask why the calculus was not broken up in the second operation?

Mr. Erichsen replied that he was unprepared for the difficulty which presented itself, and had not a lithotrite at hand; he, however, used the common forceps, but could not succeed in crushing the stone. Under all the circumstances he thought it better that the operation should be suspended, and a fresh effort made to extract the calculus on another occasion.

Mr. Birkett inquired if Mr. Thompson could give any account of the measurement of the pelvis in its recent state?

Mr. Thompson, in reply, said that the rectum had not been examined. The Society would remember that there was not the slightest suspicion that such a state of things existed. It was true there was some rickety distortion of the upper and lower extremities, but never had such a condition been regarded as indicating danger to the lithotomist. Not a case of the kind was on record in the Surgical literature of the subject, as far as he knew, and his inquiry had been extended. He was pleased to hear from Dr. Tyler Smith that it was quite possible to ascertain the fact by rectal examination, and he himself believed that nothing could be easier; hence he doubted the existence of a rickety pelvis in those cases alluded to, in which no sign had been perceived through the bowel. But the practical lesson he had learned from the remarks of Mr. Adams, Mr. Shaw, and others was, that a highly rachitic condition of the lower limbs indicated pelvic deformity; this ought in future to be borne in mind when such cases with calculus were presented to the Surgeon. Still, the pelvic deformity causing difficult lithotomy must be rare when we considered the great number of children who were subjects of the operation. He now came to the question of Mr. Holt—viz., why, after the non-success of so experienced a Surgeon as Mr. Erichsen by the median operation, did Mr. Thompson repeat the proceeding? why did he not adopt the supra-pubic method? He replied, first, that it is very easy to say what should have been done when all the facts have come to light—facts only known after post-mortem examination has revealed them; and it was on this account he had brought the case forward to-night as a guide in future. And further, as he had stated in the paper, it was still by no means quite certain that that would have been the best proceeding in this case, for it was to be recollected that the median operation had proved quite successful in freeing the child from his stone, although he had unfortunately died from peritonitis. Then, again, on sounding, nothing was easier than to enter the bladder and find the stone, and this being so, he had preferred, as a fistulous opening already existed, to enter by the old track, instead of adopting a plan which would involve two openings into the child's bladder. Lastly, that he had not seen the first operation, and had heard nothing certain respecting it, having been abroad at the time of its occurrence. Mr. Erichsen was away from the Hospital on the child's second appearance there, and had, in reply to his (Mr. Thompson's) application, kindly desired him to do what he thought proper, as delay was evidently inadmissible. In respect of Mr. Lee's remark on the large size of the stone as compared with the pelvic opening, he would state that it was only by firmly holding the stone through the abdominal parietes, which was easily accomplished, and presenting it lengthwise in that manner, that it was possible to lay hold of and extract it.

Mr. T. P. Salt, of Birmingham, exhibited

A NEW TRUSS,

invented and patented by himself, which appears to be possessed of the following advantages:—1. It affords, in addition to the usual *inward* pressure of ordinary trusses, a second or *upward* (lifting) pressure always required for support of hernia, and attempted to be given by a variety of clumsy contrivances, the chief of which is the linen strap from behind fastened upon a peg at the lower part of the pad. This is the only truss which gives the lifting pressure in an unobjectionable manner. 2. By the peculiar mode in which the vertical or lifting springs are attached to the pads, no displacement of the pads can take place when once put in position; neither can there be any friction on the skin over the hernial openings. 3. The facility with which the position of the pads may be placed in relation to the median line of the abdomen, and the spring across the abdomen having curves coincident with it, the spring of the truss lies more evenly against the body. 4. The back support, consisting of two pads instead of one—one placed above the horizontal line (spring), the other below—gives greater stability to the front part on which the pads are suspended; hence this truss is more likely to remain *in situ*. 5. Every part of the patent truss is made by machinery, instead of by hand; hence any portion damaged or soiled can be rectified without the necessity of sending the truss to the instrument maker. 6. The pads are an eminent improvement. The fringed edges of ordinary trusses, in which the cushions are made by stitching, are constantly chafing the skin; but by turning these cushions into a metallic capsule or clip, the edges and surface of the pads are exquisitely smooth and soft.

OBITUARY.

HENRY ANCELL, Esq.

Of all the departments of Medical journalism there is one that never is empty, the obituary column. There it stands, week after week, with change of words, truly, but telling evermore the same general facts. Another brother gone from us, in most cases just when he could be least spared. Who, having entered the practice of his profession in London fifteen years ago even, can look round now and see the changes and not start. The sweep that has been made in our ranks has been unexampled. Why it is not difficult to say. The race is more severe, the struggle more terrible! As in a battle, the prominent men fall first; so with us, it is a march to the front, a cry of success and the grave.

We differ from other men who work and overwork: our barrister friend has his vacation; our parliamentarian has his tour; and all have their amusements. We have nothing of the kind till we are too old to profit by the change. Nay, we lack more than other men amusements at home. A cold, sickening, and unwholesome conventionality fixes us to given forms and modes of life unsound and foolish. We must not laugh, we must not leap, we must not loiter like other men; but on we must go, on the same old beaten track, seeing one son of Earth die to-day, having, in misery, another born to-morrow, and so through the long year, in the midst of suffering and sorrow, with no prospect of release, and no contrasts. Little wonder, then, that our ranks thin so fast, and that our first men go as they stand,—

> "Of heroes slain the foremost part to claim,
> The first in glory as the first in fame."

We have for our obituary this week Henry Ancell, who died at his residence, 5, Norfolk-terrace, Hyde-park, on November 19 last. A general Practitioner, Mr. Ancell, and in that important degree of Medical practice, foremost perhaps in science, foremost certainly in industry, and behind nobody anywhere in honesty, devotion to the free and good, and to truth. A plain man in every sense; not eloquent, and yet in a degree gifted with speech; not built to command, yet always commanding the attention of those who came into communion with him. A man who thought more than once on every subject, and who, indeed, went into details to an extent that was sometimes painfully minute; a scholar by nature rather than by art; and a politician by art rather than by nature.

Mr. Ancell was born at Croydon, in the year 1802, on January 23. His father, as we are informed by one of his oldest friends, to whom we are indebted for the facts in this notice, had a cotton mill at Carshalton. His grandfather, and the grandfather of the present Sir Robert Peel, were once joint managers of a cotton mill in Manchester. By good fortune Mr. Peel got a partnership in the business. His co-manager was naturally hurt, and left the spot; he settled afterwards at Carshalton.

Our Mr. Ancell, after being educated at Croydon, went to Yoxford, in Suffolk, and passed the ordinary apprenticeship term with Dr. Wilson. He told the writer of this memoir that this apprenticeship of his was the best school he had ever attended.

Then he went to Edinburgh, studied a short time there, and soon afterwards he must needs see America. He trudged the States on foot between the years 1823 and 1825, and returned to England with the full intention of going back and settling in Cincinnati; but he was dissuaded from his purpose, and instead of it went into partnership with his brother William as a chemist and druggist. During this interval he attended lectures at St. George's Hospital; in the year 1828 became M.R.C.S. and in 1831 L.S.A. Having qualified, he laid himself out for practice in Albion-street, Hyde-park, and in a short time carried on a successful and fairly lucrative professional business. He was not content simply to work at the routine; he accepted in 1836 the Surgeoncy to the Western General Dispensary, and in 1837 he commenced to lecture on Materia Medica and Medical Jurisprudence at Lane's school, adjoining St. George's Hospital. In both these appointments he worked right well, he was so steady to his work, so precise, so clear. His lectures were very plain, but they were understood; his mode was analytical rather than constructive, and his reverence for old doctrine was not excessive. His lectures on the blood, delivered at this school in 1839 and 1840, were collected and published in the *Lancet*. These lectures were a masterly epitome of all that was known at that time on the subject, they only wanted new light to have been of the first order. Soon after these lectures were published he wrote "Commentaries on Liebig," in which he treated the German philosopher with fair but hard criticism. The contrast between Liebig and Ancell was necessarily strong: the one all fire and daring, and suggestive; the other all coolness, cautiousness, and critical. The poet and the man of hard fact.

The next great labour by Mr. Ancell was his massive volume on "Tuberculosis." Why should we describe it—a book so well known? Eight hundred-paged book, the largest in modern times on any Medical shelf, and the fullest of information; a book which no one could be expected to read clean through, but to which every person must turn who would know the history of tuberculosis. How it was ever written is the marvel; in the midst of practice, night-work, anxiety, sorrow, how was it done? We once asked him, and he answered, "By laying one brick every day." In this book there are important inferences drawn which are very sound, but are not skilfully executed as specimens of literary art.

Of late years Mr. Ancell had ceased to lecture; at his school he was succeeded in Materia Medica by Dr. Lankester, and in Medical Jurisprudence by Mr. Waller and Dr. Richardson. His latest labours have been spent in adding articles to Cooper's "Surgical Dictionary," the new edition of which is now passing through the press under the direction of Mr. Lane. He was also engaged at, and had at his death nearly completed, a book on "Blood Poisons," a work which, with an extended life of its author, will probably be published at an early date.

In recording the literary and scientific life of Mr. Ancell, we must not lose sight of him as a Medical reformer and politician. In these respects he stood long and frequently before the public. His feelings were catholic and broad. He thought that distinctions in the Profession were useful; but he always maintained that position should be acquired by pure merit and hard scientific labour. He wished earnestly to see the Profession more fully represented in Parliament, and believed that in the end the one Faculty of Medicine would be an accomplished fact. As a supporter of these views in a just and moderate form, Mr. Ancell acted as honorary secretary to the National Association of General Practitioners in 1844-45. When that body was replaced by the National Institute, Mr. Ancell resigned the secretariat, but continued on the council an active member until the Institute ceased.

In London, Medical politics outside the corporations were conducted almost exclusively by the two bodies named until the Institute was closed. Then, soon afterwards, the Provincial Medical Association began to assume a London life. The journal of the association having been moved to the metropolis, the Metropolitan Branch was formed by Sir John Forbes, Dr. Cormack, Dr. Richardson, and Dr. Ogier Ward. Mr. Ancell joined at once, and became for some years a very active member. He also acted as a member of the Parliamentary Reform Committee of the branch, and took a leading share in the re-formation of the Medical Association, and in its change from Provincial to British. At the meeting of the association at York, Mr. Ancell was the most prominent speaker. He discussed the laws of the association with a pertinacity and clearness that was as effective as it was sustained. "He is like the woman of old," said an opponent, "he is killing us one by one from sheer importunity." It was impossible to meet such an advocate. He positively sat up all one night examining the various points to be debated, and next morning was at work again as fresh as ever. As the new Medical Bill came under discussion, Mr. Ancell at first took great interest in the proceedings. His advocacy was devoted to support the direct representation of the whole Profession in the Medical Council. He lost heart in the bill as soon as he saw that plan hopeless, and said no more.

He might, however, have renewed the contest, but that other and more anxious cares filled his mind. In 1855 he lost his only son, who had entered the Army as Surgeon in the 11th Hussars. Mr. Ancell had formed for his son, in his own mind, a different career, and the entrance into the Army was naturally a severe blow. This was rendered still more serious by the death of the young gentleman at Kadikoi in 1855.

From that date Mr. Ancell was mainly engaged in private practice, in writing his work on "Blood Poisons," and in contributing to the new "Cooper's Surgical Dictionary." In January, 1862, he suffered from a severe attack of influenza, and was left exceedingly feeble. In the autumn he had an attack of spasmodic breathing, which was repeated several times. London not seeming to agree with him, he went to Brighton to winter there; he did not improve, and therefore passed to Tours, where the cough was relieved. He suffered here, however, from symptoms of remittent fever, symptoms to which he had been subject while in America; he returned to town in the spring, and remained there until September, except during a few weeks spent in the Midland Counties; afterwards he proceeded to Lyme Regis for the winter. He was seized suddenly while at Lyme Regis, on October 11, with pain in the abdomen, and was brought back to town. From the time of this attack he continued gradually to sink until November 11, when death relieved him from his sufferings. The cause of his death was a large abscess situated behind the colon.

There have been more original men in Medicine than Mr. Ancell, but none more earnest; men more powerful, but none more industrious. Of the three elements that constitute genius he had two—*fearlessness* and *fact*, he wanted *force*. Vale !

MEDICAL NEWS.

◆

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, November 26, 1863:—

Cornelius Harrison Ward, Tollerton, Nottingham; William Milward Seabrook, Old Steine, Brighton; Herbert Everitt, University College; James Forman Milner, Hull; William Bentley Forde, Queenstown, Ireland; Richard May Miller, New College Hospital, Barnstaple.

The following gentlemen also on the same day passed their First Examination:—

Arthur Bayley Adams, London Hospital; Albert Waymouth, Middlesex Hospital; Albert James Wallis, St. Bartholomew's Hospital; Edwin Child, Charing-cross Hospital; Thomas Collier, Guy's Hospital; Nynian H. Lower, Guy's Hospital; Robert Charles Earle, Guy's Hospital; William Griffith Williams, King's College Hospital.

University of Cambridge.—Edward Burd, M.D. Cantab., Senior Physician to the Salop Infirmary, was, at the congregation holden on November 26 at Cambridge, admitted to the degree of "Master in Surgery." This is the first degree in Surgery that has been conferred in this University.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Board, Edmund C., M.R.C.S. Eng., has been elected House-Surgeon to the Bristol Royal Infirmary.

Cooper, H., M.R.C.S. Eng., has been elected Assistant House-Surgeon to the Bristol Royal Infirmary.

Corrigan, John D., M.D., T.C. Dub., has been elected President of the King and Queen's College of Physicians in Ireland.

Croft, John, F.R.C.S. Eng., has been appointed Assistant-Surgeon to St. Thomas's Hospital.

Duncan, James F., M.D., has been elected Vice-President of the King and Queen's College of Physicians in Ireland.

Main, William, M.D. Edin., has been appointed House-Surgeon to the Alnwick Infirmary.

Sisson, Richard S., M.D. Edin., has been appoined Physician to the Royal General Dispensary, Bartholomew-close.

Smith, Aquilla, M.D., T.C. Dub., has been elected Vice-President of the King and Queen's College of Physicians in Ireland.

Walshe, R., L.R.C.P. Edin., has been appointed Surgeon to the Carlisle Fever Hospital and House of Recovery.

Warburton, Edward, M.R.C.S. Eng., has been appointed Medical Officer to the Pateley Bridge New Workhouse.

DEATHS.

Alexander, James, L.R.C.P. Edin., at Wooler, Northumberland, on November 25, aged 66.

Axford, Henry, Surgeon, in practice prior to 1815, at King's-square, Bridgewater, on November 28, aged 83.

Beaman, George Hulme, M.R.C.S. Eng., at Bridge-avenue, Hammersmith, on November 29, aged 38.

Cox, Edward Townsend, at Temple-row, Birmingham, on November 26, agod 93.

Duncan, F. M., M.D., at the Dispensary, Carlisle, on November 20.

Dykes, John, at Woodside, Hamilton, N.B., on November 19.

Edwards, Henry, M.R.C.S. Eng., at Tutbury, Burton-on-Trent, on November 11, aged 74.

Fisher, Michael W., M.D. Glasg., at Terrington St. Clement's, Norfolk, on November 18, aged 27.

Law, Charles, L.S.A., of Virginia-row, Bethnal-green, on November 25.

Macritchie, William D., M.D., at 4, Archibald-place, Edinburgh, on November 16, formerly Surgeon H.E.I.C.S.

Tomlinson, Thomas, L.S.A., at Theale, Berks, formerly of Maldon, on November 25, aged 64.

Testimonial.—On the 18th of June, previous to the departure of the 5th Lancers for India, a very handsome silver-mounted crystal claret-jug was presented by the non-commissioned officers of the 5th Lancers to Dr. Huish, their late Surgeon, on his quitting the regiment, as a testimony of their esteem and a mark of gratitude for the way in which he had attended to them and their families during the years he had had Medical charge of the regiment. The plate was presented by the senior Staff Sergeant, with a suitable address, supported by a proportion of non-commissioned officers from each troop.

St. Mark's Hospital.—A dinner was given, on November 30, at the London Tavern, Bishopsgate-street, on the occasion of the presentation of a testimonial to Peter Yeames Gowlland, Esq., F.R.C.S., by the patients of St. Mark's Hospital. The Rev. Thomas J. Rowsell, M.A., occupied the chair, and was supported by Messrs. Dollond, Brookes, etc. The testimonial consisted of an elegant clock, manufactured by Frodsham and Co., of Gresham-street, cased in black marble stand, surmounted with two sphynxes in bronze, supported by two columns, and bearing the following inscription:—"Presented to Peter Yeames Gowlland, Esq., by 191 patients of St. Mark's Hospital, as an earnest, loving token of gratitude for his untiring care and great skill shown in the treatment of those under his charge at that good and humane institution.—30th November, 1863."

Alleged Death from Chloroform Administered During Labour.—Dr. Pomeroy, of New York, relates the case of a woman, aged 40, to whom, during her tenth labour, the pains being very severe, he administered chloroform without causing full anæsthetic effect. No unusual symptoms were observed until the patient began to return to consciousness, about half an hour from the commencement of the inhalation, when a few moist râles indicated irritation of the air-passages. This was at 11 p.m., when an opiate was administered, and at 10 next morning Dr. Pomeroy found her with difficult breathing, feeble pulse, and other signs of sinking. Brandy was freely administered, and an emetic was given to clear the obstructed bronchi (!), and in a quarter of an hour the patient was dead. There was no post-mortem.—*American Med. Times*, No. 20. [In the face of the absence of all account of the condition of this patient between 11 p.m. and 10 a.m., and the want of a post-mortem, he must be a bold man who pronounces this as a death from chloroform.]

The Royal Society.—The anniversary meeting of this Society was held at Burlington-house on Monday, the 30th November, when the officers and council for the ensuing year were elected as follows:—*President*—Major-General Edward Sabine, R.A., D.C.L., LL.D. *Treasurer*—William Allen Miller, M.D., LL.D. *Secretaries*—William Sharpey, M.D., LL.D., and George Gabriel Stokes, M.A., D.C.L. *Foreign Secretary*—Professor William Hallows Miller, M.A. *Other Members of the Council*—James Alderson, M.D.; George Busk, sec., L.S.; Colonel Sir George Everest, C.B.; Hugh Falconer, M.A., M.D.; John Hall Gladstone, Ph.D.; Joseph Dalton Hooker, M.D.; Henry Bence Jones, M.A., M.D.; Professor James Clerk Maxwell, M.A.; Professor William Pole, C.E.; Archibald Smith, M.A.; Professor Henry J. Stephen Smith, M.A.; the Earl Stanhope, P.S.A., D.C.L.; Professor James Joseph Sylvester, M.A.; Thomas Watson, M.D., D.C.L.; Professor Charles Wheatstone, D.C.L., and Rev. Professor Robert Willis, M.A. At the same time medals were presented to Professor Sedgwick for his observations and discoveries in geology; to the Rev. M. J. Berkeley, for his studies in botany; and to Mr. J. P. Gassiot, for his researches in electricity.

Pathological Society of Dublin.—The first meeting of the twenty-fifth annual session of this society was held in the Anatomical Theatre of Trinity College, on Saturday, the 28th ult. Dr. Fleming exhibited a remarkable specimen of a very large fibro-cystic tumour removed from the side of the neck and face of a young girl. Dr. Bennett, brought forward a fine example of the chalky deposit of gout on the articular surfaces of the knee, ankle, and other joints, and what was interesting, co-existing with chronic rheumatic arthritis in some of the articulations—the deposit consisted of lithate of soda. An interesting communication was made also by Dr. Law. The subject of the essay for the Society's gold medal, to be awarded at the close of the session, was announced to be "The Pathology and Diagnosis of Diseases of the Ovaries." On the termination of the ordinary business of the meeting the following officers were elected for the ensuing year:—*President*—Robert Mayne. *Vice-Presidents*—Joseph O'Ferrall, James S. Hughes, Alfred H. M'Clintock, Jolliffe Tufnell, Benjamin G. M'Dowel, Alfred Hudson. *Council*—Robert Adams, John Banks, Awley Banon, Thomas Beatty, Dominick J. Corrigan, Fleetwood Churchill, Christopher Fleming, Samuel Gordon, John Hamilton, Edward Hutton, George Kidd, Robert Law. *Honorary Secretary*—William Stokes. *Secretary and Treasurer*—Robert W. Smith. *Secretary for Foreign Correspondence*—Robert D. Lyons.

The Supposed Murder at Guildford.—It will be remembered that some weeks ago a sergeant of the 3rd Buffs, named Maghe, was found with his throat cut in the bedroom of a public-house at Guildford, and by his side the dead body of a young woman named Waterer. It came to the knowledge of the police that the woman had a few days before her death purchased a packet of "Butler's Vermin Killer," a powder composed of strychnia, flour, and soot. The sergeant, who has since recovered from his self-inflicted wound, asserts that he and the woman had mutually agreed to poison themselves, and this account receives confirmation from a letter which Waterer addressed to her mother, and which was found in the bedroom. The body of Waterer has been examined, and the stomach and its contents analysed by Professor Taylor, who, however, failed in detecting in them either strychnia or soot. He, however, stated that the condition of the organs, especially the contracted and empty condition of the heart, and the absence of congestion of the lungs rendered it probable that death took place from that poison. His examination of the body negatived the idea of strangulation, which had received support from certain marks found on the neck of deceased. There was no laceration or indentation of the neck, an absence of effusion of blood in the parts corresponding to the marks seen on the outside, and an absence of any signs of resistance on the body. The condition of the heart and lungs was adverse to the theory of suffocation. The Coroner's jury found a verdict of "Self Murder," and that Maghe was guilty of aiding and abetting in the same. He is to be prosecuted on the charge of wilful murder.

PROFESSOR HYRTL.—The amphitheatre was always crowded for his demonstrations on topographical anatomy, although he leetures at an early hour for a winter morning—between 6 and 7. The lecturer came in dressed in very shabby attire, the main features of which were a soiled morning gown, and a stock without a collar. Pushing up his large horn spectacles, he begins with some humorous remark, exciting a roar throughout the class, after which he goes seriously to work, although during the hour and a half many an excellent joke is made. Hyrtl's animation and wit, as employed in his lectures, are not without their critics. I heard an eminent teacher speak of him as a "play actor." Be that as it may, he holds large classes, while Rokitansky, with his world-wide fame, has scarcely a dozen to hear his monotonous readings from books long since given to the public. Joseph Hyrtl, now one of the Professors of Anatomy in the Vienna University, was born in Hungary, in 1811, and, having studied Medicine in Vienna, was, in 1835, two years after graduation, appointed Professor of Anatomy in Prague University, where he remained until called to the chair which he now occupies. His great achievements have been his minutely injected preparations, and those illustrating the comparative anatomy of the internal ear. His published works are widely known and appreciated. He did much to form the anatomical museums of Prague and Vienna, besides making a very large private collection. This was destroyed, together with his house, by the soldiers in the suppression of the insurrection of 1848. While this was going on, Hyrtl was assisting the wounded in the Hospital, and on returning home, he found all his effects and the results of his scientific labours destroyed. Referring to this circumstance, he says:—"On seeing the ruins, I went to a neighbour to borrow a shirt to replace mine soiled with blood, and a handkerchief with which to weep." Since then he has made a new collection, consisting of the skeletons of fish, which is very large, filling two rooms. He has also a large collection of *ossicula auditûs* of the mammalia, probably the most complete in the world, as it obtained the medal at the London Exhibition. They are arranged on black boards, and possess the highest interest for the student in comparative anatomy. One of his collections was purchased last year for the Hunterian Museum of the London College of Surgeons. Hyrtl is a very industrious man, spending his days in dissecting in a little dirty room at the back of the amphitheatre, with a text-book of anatomy before him. I found him thus one day with Gray, lying near the infant cadaver he was at work upon. In person he is tall and well formed; he is pleasing of speech, and his writings are characterised by originality and humour, combined with lucidity of expression.—*Correspondent of the American Medical Times.*

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. W. Self.—The present arrangements do not permit the publication of marriages and births in this Journal.

Of course we cannot allow ourselves a single word of comment on the Crawley Court-martial until the finding of the Court is made known.

Our notice of Dr. Mapother's lecture is again unavoidably delayed for a week.

The letters of Mr. E. L. Bayley, Dr. Beaumont, Dr. Kidd, and Mr. Mudge shall appear next week.

MEDICAL FEES.

*** In answer to the letter of "A Young General Practitioner," published in the *Medical Times and Gazette* of November 21, we have received, from the Secretary of the Glasgow Medico-Chirurgical Society, the following report and scale of fees issued by a Committee appointed by three of the principal Medical Bodies at Glasgow to examine and report on the subject of Medical charges. We are informed that medicines are not so generally supplied by Practitioners in Scotland as in England, and form no part of the customary Medical charge:—

"The Committees on Medical Fees appointed by the Faculty of Physicians and Surgeons, the Medical, and the Medico-Chirurgical Societies of Glasgow, having procured every available information regarding the customary charges for Medical services in Glasgow and in other large cities of the kingdom, and having maturely considered the same at numerous, separate, and conjoint meetings, unanimously agree to recommend the following scale of fees, as indicating the remuneration to which every qualified Medical Practitioner is entitled, however junior his position or limited his practice.

"While the Committees feel assured that such a scale will prove of great utility to the Profession generally, they would here take leave to remark, that those members of the Profession whose services are in high request, owing to their seniority, station in society, extensive experience, or other qualification, are themselves the best judges of that higher amount of remuneration which they ought to receive, and which they may consider equivalent to the demands made on their time and skill.

"The Committees have found that the rate of charges for Professional services is in every locality based upon the presumed annual income of the patient or employer; and, acting upon this principle, have divided society into five classes.

"The Committees recommend that the Practitioner should render his note of charges for Professional services either immediately after his attendance terminates, or at regular half-yearly periods.

"*Table of Fees.*

"Class I. Incomes exceeding £1000 per annum.
,, II. ,, from £500 to £1000 ,,
,, III. ,, ,, £250 ,, £500 ,,
,, IV. ,, ,, £100 ,, £250 ,,
,, V. ,, under £100 ,,

	"Classes.				
	I.	II.	III.	IV.	V.
"Single visit, from 9 a.m. till 8 p.m. . . .	£1 1s.	£1 1s.	10s. 6d.	5s. 0d.	2s. 6d.
"A few visits . . .	10s. 6d.	7s.	5s. 0d.	3s. 6d.	
"Prolonged attendance .	7s. 0d.	5s.	3s. 6d.	2s. 6d.	
"Before or after usual visiting hours (from 9 a.m. till 8 p.m.), if the visit be requested by the patient or friends, or considered necessary by the attendant, a fee and a-half to be charged.					
"Advice at Practitioner's residence, same as visit.					
"Night visits, from 10 p.m. to 7 a.m., double or treble fee.					
"Detention, either from the urgency of the case or the desire of the patient's friends, and special trouble, as in the dressing of wounds, an extra rate to be charged.					
"Country visits (beyond the Parliamentary boundaries), double fee, and for every mile further an ordinary fee added.					
"Coast visits, according to time and distance, but not less than . .			£2 2s.		
"Consultation with Practitioner in charge of the case . . . (The consultant's fee is understood to be payable at time of visit.)	£2 2s.	£1 1s.		10s. 6d.	5s.
"Consultation of Practitioner with consulting Physician or Surgeon, double ordinary visiting fee.					
"Midwifery, delivery in ordinary case . .	£7 7s. & upwds.	£5 5s. to £10 10s.	£3 3s. to £5.	£1 1s. to £3 3s.	£1 1s.
"Ditto, difficult or protracted case, an extra charge.					
"Visits after delivery to be charged as per visiting scale.					
"Operations charged according to their importance and the social condition of the patient.					
"Visits after operation to be charged as per visiting scale.					
"Reducing dislocations or fractures, etc. . .		From £5 5s. to 10s. 6d.			
"Certificates of lunacy .		From £2 2s. to 10s. 6d.			
"Reports for Insurance Companies (in all cases chargeable against Company), on policies of £300 and upwards .			£1 1s.		
"Under £300 . . .			10s. 6d."		

THE TESTIMONIAL TO THE LATE DR. BALY.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As one of the subscribers to the testimonial to the late lamented Dr. Baly, I should feel much obliged if the secretary or one of the committee could inform me and others through your columns when the portrait, which it was proposed to present to the subscribers, will be ready?

November 26. I am, &c. M.D.

COMMUNICATIONS have been received from—

MR. ALFRED MASTER; DR. EDWARD BURD; APOTHECARIES' HALL; DR. C. KIDD; MR. GEORGE PUCKLE; DR. JAMES ADAMS; M.D.; MR. R. L. BAYLEY; MR. WILLIAM SELF; DR. H. C. ANDREWS; ODONTOLOGICAL SOCIETY; SOCIETY OF ARTS; ROYAL INSTITUTION; DR. JOHN D. HILL; MR. JAMES CHILDS; EPIDEMIOLOGICAL SOCIETY; ETHNOLOGICAL SOCIETY; MR. SPENCER WATSON; MR. SHEPPHERD; MR. GEE; DR. GEORGE JOHNSON; DR. RAMSKILL; MR. DUNNETT SPANTON; MR. W. M. BAKER; DR. MARTYN; MR. CALLENDER; MR. E. M. C. HOOKER; MR. W. B. KESTEVEN.

BOOKS RECEIVED.

The Stomach Medically and Morally Considered. Lectures delivered at the St. Martin's Library by Lionel John Beale, M.R.C.S., F.R.S., etc., Medical Officer of Health, St. Martin's-in-the-Fields. London: Harrison, 59, Pall-mall. Pp. 104.

⁂ Of instruction such as Mr. Beale's, the public cannot have too much. He tells them that they must take care of their bodily organs if they hope to enjoy health either of mind or of body, and that it is absurd to ruin the stomach, or brain, or liver by a long course of ignorant sensuality, and then come to the Physician expecting that some drug will undo in a day the result of the misconduct of years. He equally scouts the water-cure and Turkish-bath, considered as substitutes for temperance. This little brochure is especially aimed at the vice of gluttony. There are vast numbers of persons in all ranks of society who would benefit by reading it,—half-educated persons, tradesmen suddenly made rich, gentlemen's servants, journeymen who squander half-a-week's wages in one day's junketing, and all others to whom a good dinner or glass of spirits is the *summum bonum.* At the same time we are bound to add that Mr. Beale errs a little, in our opinion, by his predilection for too severe an abstemiousness. If one-half the world eat too much, the other do not eat enough. He gives us no figures except once, when he says, "Half a pint to a pint of real milk is not at all too much for the daily consumption" of a child that has been weaned. If Mr. Beale would take the trouble to measure and weigh the daily supplies of a thriving child of twelve months, we think he will have to double these figures. He should recollect that school-children, most apprentices, shopwomen, and others dependent upon stingy or needy householders, do not, as a rule, get food enough in quantity, quality, or variety; and must not allow too parsimonious a diet-table to be justified by his authority. He likewise, we think, hardly sets stimulants at their real value. Not that he is a teetotaller; though he very justly insists on habitual moderation in the use of wine, with occasional abstinence. Still he hardly estimates these substances at their real value. Altogether, this work is extremely valuable in teaching some most important facts about health and life; but the abstemious diet recommended, though suitable to middle-aged persons in easy circumstances, subject to no anxiety, nor addicted to great bodily or mental exertion, is yet, we think, scarcely liberal enough for the young, the active, and those who undergo a good deal of anxious and exciting labour. When Mr. Beale says "the whole class of complaints known under the name of dyspepsia, indigestion, bilious, and liver derangements" are caused by over-indulgence, we can only suppose him practising amongst an opulent and easy-going set, and happily forgetful that these same maladies in a less fortunate class of patients may generally be cured by a course of good soup, mutton chops, and sherry.

On the Classification of the Various forms of Insanity on a Rational and Practical Basis. By David Skae, M.D., F.R.C.S. Edin. Pamphlet.

⁂ This is the address delivered by Dr. Skae at the annual meeting of the Association of Medical Officers of Asylums, July 9, 1863. He objects to the ordinary classification into mania, dementia, monomania, etc., as mere conventional distinctions, passing into each other at various stages of the same case. He proposes instead, to take the natural history of each case regarded in its totality, as the grand essential of classification, and to treat of the mere variety of delirium or aberration as an accidental accompaniment; *e.g.*, he would treat idiocy, imbecility, and puerperal, epileptic, hysteric, senile, phthisical, climacteric, etc., as examples of real classes.

Variation of the Death-rate in England. By Mr. W. Royston. Manchester: Cave and Sever. 1860.

⁂ A capital analysis of causes of mortality in general, and of the differences between the mortality of town and country. The writer does not ascribe so much importance to zymotic mortality, as to that from persistent sources of bad health and degeneration, *e.g.*, phthisis, scrofula, etc. The greater mortality of town over country at all ages is noted, and a fair distinction made between sanitary measures which the municipal bodies can effect, and improvements in habits and morals which depend on the people. Both should go together.

Seventh Annual Report on the Sanitary Condition of St. Pancras for 1862. By Thomas Hillier, M.D.

⁂ Dr. Hillier says:—"I cannot report much progress in regard to new sewerage during the year 1862. The drainage of Highgate and the upper part of Kentish Town has been under the consideration of the Highways, Sewers, and Public Works Committee, but no action has been taken. There are at present a very great many parts of this parish most imperfectly drained, and consequently very unhealthy, which cannot be improved until the Vestry provides new sewers for them. In this respect we are not much better off than when the Metropolis Local Management Act came into operation. A step has been taken in the right direction during the present year, by the order for a new sewer in John-street, Tottenham-court-road."

Remarks on Some of the Numerical Tests of the Health of Towns. By A. Ransome, M.B., B.A. Cantab., M.R.C.S., and W. Royston. Manchester: Powlson and Sons. 1863.

⁂ This, like all the publications of the Manchester and Salford Sanitary Association, is extremely suggestive and valuable. It shows, as we have observed, that a high death-rate is no sign that a *place* is unhealthy, but rather that the people are immoral or ignorant. The awfully high mortality of children; and the deceptive effects of immigration of adults into large towns are well shown.

On General Principles of Medicine: an Introductory Address, delivered at St. George's Hospital. By Henry Lee, F.R.C.S. London: John Churchill and Sons. 1863.

⁂ One of the best of the Introductories, and well worth perusal any evening. The author luminously expounds the best methods of study, and illustrates them by some of the best examples in the history of our Profession, winding up with that great master—Brodie.

On Ovarian Dropsy, with Cases of Ovariotomy. By Thomas Keith, M.D. Edinburgh: Oliver and Boyd. 1863.

⁂ From the Edinburgh Medical Journal, October, 1863. Dr. Keith gives three fresh cases—two replete with difficulty, one fatal. He says, wait till the life of the patient is threatened, then operate. This we suspect will be the future rule in ovarian disease.

Manual of the Metalloids. By James Apjohn, M.D., F.R.S., Professor of Chemistry in the University of Dublin. London: Longman and Co. 1864.

⁂ A clear, well-written, and illustrated introduction to the study of the non-metallic elements. It forms part of "Galbraith and Haughton's Scientific Manuals," "Experimental and Natural Science Series."

Illustrations of Dissections in a Series of Original Coloured Plates the Size of Life, Representing the Dissections of the Human Body. Part 6. By G. Viner Ellis, Professor of Anatomy in University College, London, and G. H. Ford, Esq. London: Walton and Maberly, Upper Gower-street, and Ivy-lane, Paternoster-row.

Sanitary Statistics and Proceedings of St. Giles's District. By Dr. Buchanan. 1863.

Geschichte Natur und Gesundheitslehre des Ehelichen Lebens. Von Eduard Reich. Cassel, 1864.

Topics of the Day: Medical, Social, and Scientific. By James A. Hingeston, M.R.C.S.E. London: John Churchill and Sons. 1863.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 28, 1863.

BIRTHS.

Births of Boys, 1011; Girls, 927; Total, 1938.
Average of 10 corresponding weeks, 1853-62, 1728·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	747	695	1442
Average of the ten years 1853-62	692·0	704·0	1396·0
Average corrected to increased population..	..	..	..
Deaths of people above 90	..	..	11

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	..	5	10	2	7	12	1
North ..	618,210	5	12	23	5	4	13	4
Central ..	378,058	7	2	15	1	3	8	1
East	571,158	3	2	34	2	5	19	5
South ..	773,175	4	4	30	5	7	18	9
Total.. ..	2,803,989	19	25	112	15	26	70	20

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·943 in.
Mean temperature	47·9°
Highest point of thermometer	57
Lowest point of thermometer	35·7
Mean dew-point temperature	44·9
General direction of wind	S.W. & S.E.
Whole amount of rain in the week	0·25 in.

APPOINTMENTS FOR THE WEEK.

December 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

7. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital 1½ p.m.; Samaritan Hospital, 2½ p.m.

EPIDEMIOLOGICAL SOCIETY, 8 p.m. Dr. Bryson, R.N., "On Epidemic Pleuro-pneumonia and Phthisis in the Mediterranean Fleet."

MEDICAL SOCIETY OF LONDON, 8½ p.m. Lettsomian Lectures.—On Midwifery and Diseases of Women. Lecture III.—Treatment, Therapeutical—Arrest of Hæmorrhage by Injections, Incision of Os Uteri or the Tumour—Electrical, causing Absorption—Primary Enucleation—Secondary Enucleation or Section—Gastrotomy, etc. By C. H. F. Routh, M.D.

ODONTOLOGICAL SOCIETY, 8 p.m. Meeting.

ROYAL INSTITUTION, 2 p.m. General Monthly Meeting.

8. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

ETHNOLOGICAL SOCIETY, 8 p.m. "Account of the Weddos, a Wild Tribe of Ceylon." By a Tamil Native of that Island. John Crawfurd, Esq., "On the Commixture of the Races of Man in the New World as Affecting the Progress of Civilisation."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (8 p.m., Ballot), 8½ p.m. Mr. Moore, "On Popliteal Aneurism." Mr. Durham, "Treatment of Popliteal Aneurism by Flexion of Knee-joint."

9. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.: Middlesex, 1 p.m.; London, 2 p.m

10. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

11. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ORIGINAL LECTURES.

◆

PROFESSOR HUXLEY'S LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

VII.—*The Skulls of Mammalia.*

In order to understand the changes which the normal type of skull undergoes in the Mammalian series, it is necessary to define a few lines and planes by the help of certain well-marked organic fixed points.

A line drawn from the hinder extremity of the basi-occipital to the uppermost part of the junction between the presphenoid and the ethmoid may be called the line of the axis of the *basis cranii*, or "*basi-cranial line.*"

A second line, drawn from the premaxilla to the *basis cranii* through the junction of the vomer with the ethmoid, traverses the axis of the facial part of the skull, and may be termed the line of the axis of the *basis faciei*, or "*basi-facial line.*" This line, if produced upwards and backwards, will cut the foregoing so as to form an angle open downwards, which I shall term the "*cranio-facial angle.*"

A third line, drawn from the end of the basi-occipital bone to the posterior edge of the supra-occipital in the median line, will give the general direction of the plane of the occipital foramen, or the *occipital plane.* The angle it forms with the basi-cranial line is the "*occipital angle.*"

A fourth line, drawn from the *torcular Herophili*, or junction of the lateral and longitudinal sinuses, through the middle of a plane joining the tentorial edges of the pro-otic bones, will give the general direction of the tentorium, or, in other words, of the demarcation between cerebrum and cerebellum. (a) This line therefore may be taken to indicate the "*tentorial plane.*" The angle it forms with the basi-cranial line is the "*tentorial angle.*"

A fifth line, drawn through the median junctions of the cribriform plate of the ethmoid, with the frontal above and with the presphenoid below, will give, in the same general way, the "*olfactory plane.*" The angle it forms with the basi-cranial line is the "*olfactory angle.*"

Lastly, the longest antero-posterior measurement of the cavity which lodges the cerebrum will give the "*cerebral length.*"

Having defined these lines and planes, the following general rules may be laid down:—

1. The lower Mammalia have the *basi-cranial line* longer in proportion to the *cerebral length* than the higher. Taking the length of the *basi-cranial line* as 100, I have observed the *cerebral length* to be, in a well-developed European skull, 266; in a Negro, 236; in an adult male Gorilla, 170; in a Baboon, 144; in a Lemur, 119; in a Dog, 87; in a Beaver, 70; in a *Thylacinus*, 60; in an Opossum, 93; in *Echidna*, 100.

2. In the lower *Mammalia* the olfactory, tentorial, and occipital angles nearly approach right angles, or, in other words, the corresponding planes are nearly vertical, while they become more and more obtuse in the higher Mammals, until, in Man, these planes are nearly horizontal in the ordinary position of the skull.

3. In the lower *Mammalia* (Fig. 50) the cranio-facial angle is so open as to reach 150° or more, but, in the higher Mammalia, it becomes smaller and smaller, until, in Man, it may be as little as 90°.

4. In many of the lower *Mammalia* a sudden narrowing of the front part of the cranial cavity indicates the boundary between the chamber which lodges the cerebral hemispheres and that which contains the olfactory lobes of the brain (Fig. 50) and the latter cavity forms a large and distinct *olfactory fossa.* In the higher Mammals this cavity becomes absolutely and relatively smaller, until in Man it is so shallow and insignificant as to be hardly noticeable.

5. In the lower *Mammalia* the olfactory fossa is altogether in front of the cerebral cavity, and the cerebellar fossa is altogether behind it, the three being separated by marked constrictions (Fig. 50).

FIG. 53.

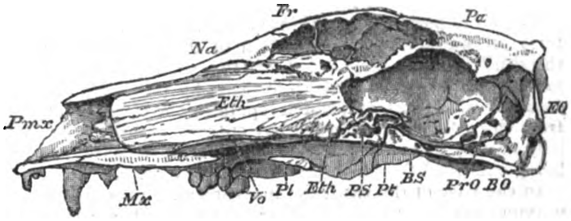

FIG. 53.—Longitudinal and vertical section of the skull of *Thylacinus Cynocephalus.*

In the higher Mammals, on the other hand, the excessive development of the cerebral hemispheres causes the cerebral chamber to overlap the olfactory fossa in front and the cerebellar fossa behind; so that these come to be placed respectively under, instead of in front of and behind, the cerebral chamber.

Thus it may be said that, in passing from the lower to the higher forms of Mammalian skull, we find the cavity for the cerebrum enlarging in proportion to the basi-cranial axis, and thrusting the olfactory plane downwards and forwards, the tentorial and occipital planes downwards and backwards, in such a manner that these may be said to rotate on the ends of the basi-cranial axis; at the same time, the basi-facial line rotates on the basi-cranial line, being more and more bent downwards and backwards.

It must be clearly understood that I by no means intend to suggest that all mammalian skulls can be arranged in a series, the lower members of which shall be distinguished from the higher by always exhibiting lesser olfactory and occipital angles, larger cranio-facial angles, less proportional cerebral lengths, etc. On the contrary, the various angles and measurements show a considerable range of irrelative variation; as, for example, in the *Cetacea*, a relatively large cerebral length is associated with small occipital and olfactory angles, and a very large cranio-facial angle; and in the *Edentata* and *Monotremata* a somewhat large olfactory angle is associated with a small tentorial and occipital angle. All that can be said is that the crania of the higher orders of Mammals, as a whole, are distinguished from those of the lower orders by the characters I have mentioned.

FIG. 54.

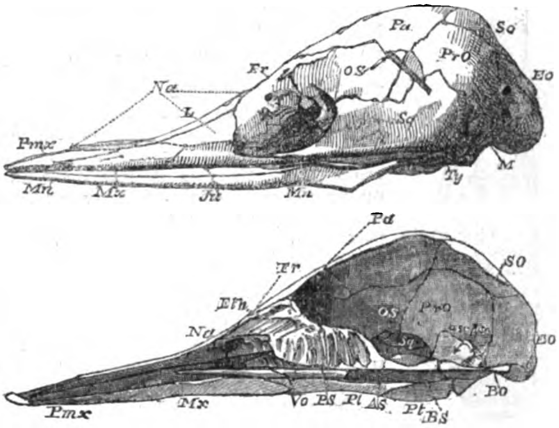

FIG. 54.—The skull of a young *Echidna* viewed from without, and in longitudinal and vertical section.

The skull of *Echidna*, (Figs. 54 and 55) may be taken as an example of the "aberrant" monotreme type of skull. It is composed of a pyriform cranium proper, and a produced, beak-like maxillary portion. The lower jaw is remarkable for its length and slenderness, and the very small vertical height of its rami.

The basi-occipital (*B.O.*) is very wide, and so much depressed as to be quite a thin lamella of bone; it contributes, to a small extent, to each occipital condyle, which, like the ex-occipital bone itself, is very large. The ex-occipitals are connected above by a wide supra-occipital, which extends so far upon the roof of the skull that the lambdoidal suture is not very distant from its summit. The plane of the roof of the skull from the occipital foramen slopes upwards and forwards to this point.

(a) Of course no straight line can give this boundary with exactness, as the co-adapted surface of the cerebrum and cerebellum, and consequently of the interposed tentorium, are curved in all directions.

The large parietals, anchylosed together in the middle line, form all but a very small portion of the rest of the roof of the skull, and are succeeded by the small frontals. These are met in the middle line, inferiorly, by the lamina perpendicularis of the ethmoid, which separates one olfactory chamber from the other, and are united by sutures, anteriorly, with the long nasals, which stop short of the anterior nasal aperture, being excluded therefrom by the premaxillaries.

In the base of the skull the basisphenoid, presphenoid, and ethmoid are anchylosed together. The basisphenoid is a wide, flattened bone, somewhat deflexed at the sides. Its long, thin, postero-lateral margins articulate externally with the broad, flat bones (*Pt*) which contribute above to form the floor of the cranial cavity by filling up a vacuity which would otherwise exist between the basisphenoid, periotic, and alisphenoid. The thick posterior and external edges of these bones are excavated by a deep groove, which forms the front wall of the tympanum and of the Eustachian tubes. The palatine bones are completely anchylosed with the sphenoid, and pass abruptly inwards from the outer edges of that bone. The anterior and internal edges of the bones (*Pt*), which obviously represent the pterygoids, articulate with them as well as with the basisphenoid. The anterior and external edges of the pterygoids are united with an antero-lateral prolongation of the pro-otic part of the periotic; and, rather above the cleft between the latter and the pterygoid, is fixed the large process of the malleus (*m*, Fig. 55), to which the tympanic ring closely adheres.

The periotic bone is remarkable for the lammellar prolongations which it sends forwards from its pro-otic, epiotic, and opisthotic regions, beyond the space required for the auditory organ, and which enter more largely into the side walls of the skull than any of its ordinary constituents. The periotic contributes towards the floor of the skull by a triangular process, which it sends in between the basi-occipital and the basisphenoid. Posteriorly, it articulates largely with the ex-occipital, the foramen for the eighth pair being situated between it and the latter. By its wide superior prolongation it unites behind with the ex-occipital, posteriorly and superiorly with the supra-occipital; anteriorly and superiorly, first with the parietal, and then with a large bone (*OS*) which stretches outwards, upwards, and backwards from the presphenoid and ethmoid, articulating partly with the frontal, and more extensively with the parietal. Except in its unusual articulation with the periotic, this bone corresponds with the orbito-sphenoid. Between the superior prolongation of the periotic, and its thin and imperfectly-ossified anterior and inferior prolongation, there is an interspace filled up by the squamosal. The lower edge of this prolongation articulates with the pterygoid, and, in front of this, forms the upper boundary of the foramen for the third division of the fifth nerve. Between its front edge and a small process, sent up by the palatine towards the orbito-sphenoid, is a small plate of bone, which alone seems to represent the alisphenoid.

FIG. 55.

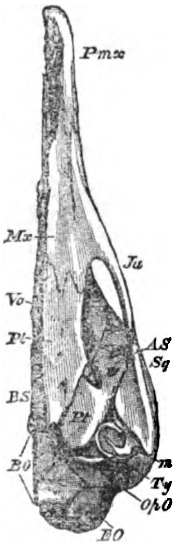

FIG. 55.—Under view of the left half of the skull of *Echidna*.

The premaxillæ enter largely into the composition of both the upper and under regions of the snout. As has been already stated, they unite in front of the nasal bones, so as to exclude the latter from the anterior nares, as is the case in some *Crocodilia*. The maxillary bones send horizontally inwards a broad and long palatine process. This, like the corresponding process of the palatine bone, is separated from its fellow in the middle line, for some distance, by the vomer. On the left side of the specimen from which this description is taken there is a distinct large triangular lachrymal (Fig. 54); it is imperforate, and situated altogether upon the side of the face. An oblique suture extends downwards and forwards from that which separates this lachrymal, inferiorly, from the adjacent bones, and seems to mark off the jugal from the maxillary bone. On the right side neither this suture exists nor any indication of a distinct lachrymal.

The essential characters of the Proboscidean cranium are best displayed in the fœtal Elephant, as the sutures become obliterated, and the true form of the skull is disguised by the enormous development of the air-chambers between the tables of the skull, in the adult.

Fig. 56 represents the longitudinally and vertically bisected skull of such an Elephant. The whole basi-cranial axis is slightly concave upwards. The basi-occipital and the basisphenoid, the presphenoid, and the ethmoid are already so completely anchylosed that the traces of their primitive distinctness have almost disappeared. On the other hand, the presphenoid and the basisphenoid are widely separated by the remains of a synchondrosis. The occipital angle is about 90°, the olfactory angle 160° to 170°.

The frontals enter as much into the front wall as into the roof of the skull, and extend largely down upon its sides. Anteriorly and externally they are prolonged into great arched supra-orbital processes, which form the roofs of the orbits.

The parietals are narrower in the middle line of the vertex than anywhere else, being encroached upon by the frontals, anteriorly, and by the supra-occipital behind. Infero-laterally, the parietals widen out very much and extend far down into the temporal fossæ, where they unite in front with the apices of the tolerably large orbito-sphenoids, and behind with the periotic and supra-occipital. Below the inferior margin of the parietals the squamosals appear largely in the lateral wall of the skull.

The alisphenoids are very small, and are directed horizontally outwards. The foramen for the exit of the third division of the trigeminal is between the hinder margin of the bone and the periotic.

The latter bone has a considerable proportional size, and is devoid of any cerebellar fossa.

FIG. 56.

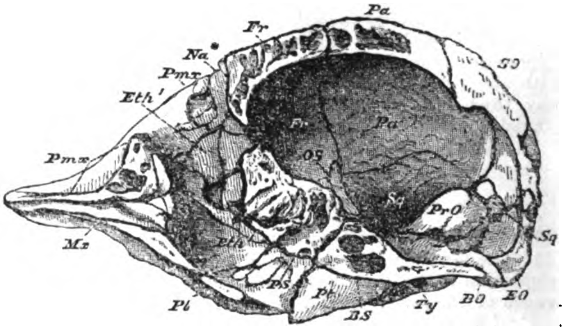

FIG. 56.—Longitudinally and vertically bisected cranium of a fœtal Elephant (*Elephas Indicus*).

On the exterior of the skull the squamosal joins the ex-occipital, so that no "*pars mastoidea*" appears upon the surface. The post-glenoidal and post-auditory processes of the squamosal are very large, and bend towards one another inferiorly, so as to meet (in the adult skull) and form a spurious external auditory meatus.

But besides this, there is a true external auditory meatus which is, as usual, an outgrowth from the tympanic. The latter bone is very large and bullate. It is grooved anteriorly by the carotid, and the short styloid process appears between it, the squamosal, and the ex-occipital.

The tympanic and the periotic are anchylosed together and wedged into the space left between the ex-occipital, squamosal, parietal, alisphenoid, and the basi-cranial axis.

The very short nasal bones (absent in the specimen figured) are adjusted by a broad posterior face to the frontals at *Na**. The large premaxillaries ascend along the sides of the anterior nasal aperture to the nasal bones, but are almost excluded from the palate, inferiorly, by the maxillaries; their alveolar portion, however, is very large and long, and this circumstance, together with the shortness of the nasal bones, throws the anterior nares, in the dry skull, almost to the top of the head. As the palatine processes of the maxillaries and palatines are, at the same time, relatively short, the posterior nares are situated but little behind the anterior nares, and thus the axis of the nasal passage forms a large angle with the basi-cranial axis. The lachrymal is a very small though distinct bone.

In the fœtal Elephant here described the space between the two tables of the skull is moderate, and is filled with a spongy diplöe; but, with advancing age, the interspace between the tables in the frontal, parietal, and supra-occipital increases until it equals or exceeds the depth of the cranial cavity, and the diplöe is replaced by vertical plates and pillars of bone, between which air cavities extend back from the frontal sinuses and nasal passages. The skull of the Elephant, resembles that of the Pig in many of its most important and characteristic features, and through the Pig its affinities are traceable to the other *Ungulata;* of these, the Tapir resembles it most in some respects, such as the shortness of the nasal bones and of the palate; the consequent large angle which the axis of the nasal passages makes with the basi-cranial axis; and the prolongation downwards and forwards of the frontal bones.

On the other hand, some Ruminants carry to an extreme the development of the frontal into a great supra-orbital arch, its extension backwards in the middle line, and the concomitant expansion of the supra-occipital forwards; so that the parietals of the Ox, for example, are reduced to a comparatively narrow band in the middle line, while they expand widely in the temporal fossæ.

The crania of the purely aquatic Mammals, such as the typical Seals, the *Sirenia* and the *Cetacea*, exhibit a certain similarity of character in the midst of very wide and important differences.

The basi-cranial axis is either flat or slightly curved upwards at its anterior and posterior extremities. The olfactory and occipital planes are vertical, or nearly so. The *squama occipitis*, alone or united with large inter-parietal elements, extends upon the vertex of the skull between the parietals, and approaches, or even reaches, the frontals, so that the parietals are very much shorter antero-posteriorly than at the sides and below.

The frontals take but a small share in the formation of the roof of the cranial cavity; the nasals are relatively short, the anterior nasal aperture relatively large, and the posterior often situated far forwards. The prefrontals, or lateral masses of the ethmoid, are small or rudimentary. The tympanic and periotic are always anchylosed together, and, whether connected or not with the squamosal, are more easily detachable from the skull than usual.

The Seals are extreme modifications of the carnivorous type of cranial structure, the *Sirenia* of the ungulate type. The *Cetacea* present resemblances to both.

In the common Seal (*Phoca vitulina*) (Fig. 57) the cranial cavity is exceedingly broad and spacious, and the cerebral extends far further back over the cerebellar chamber, and is much larger in proportion to it, than is usual in *Carnivora*. There is a strong bony tentorium, and an osseous falx is more or less developed. The basi-cranial axis, very thin and broad, is curved so as to be concave from before backwards. The synchondrosis between the presphenoid and basisphenoid persists. The superior and middle turbinal bones are greatly flattened from side to side, and unite below and internally with the lamina perpendicularis, or proper ethmoid, so that all direct communication with the superior and middle meatuses of the nose is shut off below. The inferior turbinal, on the other hand, is exceedingly large and complex in its structure. The orbito-sphenoids are large and, ascending upon the front wall of the skull, unite anteriorly behind and below the cribriform plate, so as to hide nearly the half of the ethmoid when the base of the skull is regarded from above. The presphenoids are relatively small.

Less than half the length of the frontal bones enters into the upper wall of the cranial cavity, the rest being devoted to the roof of the nasal chambers. This part of the frontals is very much narrower than the other, and is bent down at the sides, so as to form two broad thin plates, which wall in the superior and middle spongy bones, articulate below with the vomer and with the palatine, and take the place of the *os planum*.

The lower edge of the parietal unites with the front part of the alisphenoid and with the ex-occipital, leaving a great infero-lateral space, which is filled up in front and above by the squamosal, and behind and below by the periotic. The squamosal is relatively a small bone, but the periotic and the tympanic, which are anchylosed with it, are very large. A swollen *pars mastoidea* appears on the exterior of the skull, and is hollowed internally by a cavity which opens into the cranium, and extends under the anterior and posterior vertical semicircular canals.

The tympanic forms a very thick *bulla*, prolonged externally into an auditory meatus. It is firmly anchylosed with the pro-otic regions of the periotic and with the squamosal, but for the rest of its extent it is only applied to, and not anchylosed with, the periotic. It is pierced by the carotid canal.

The anchylosed squamosal, periotic, and tympanic are very easily detached from the walls of the skull.

LECTURES
ON
THE BLOOD, LYMPH, AND CHYLE OF VERTEBRATA,

DELIVERED AT
The Royal College of Surgeons of England,
DURING THE SESSION OF 1863.

By GEORGE GULLIVER, F.R.S.,
Professor of Comparative Anatomy and Physiology to that College, and late Surgeon in the Royal Regiment of Horse Guards.

LECTURE V. — *Morphological Elements of Chyle — Molecular Base — Analogies and Homologies.*

(Continued from page 554.)

Morphological Elements of Chyle.—As we have seen, the liquor chyli is limpid and nearly colourless. But we all know that the chyle of man and of many other apyrenæmatous vertebrates is an opaque white fluid; and so it is also in some birds and reptiles. This opacity and colour have been attributed to the proper chyle-corpuscles; but erroneously, as a description of the morphological elements of the chyle will prove. Of these, reckoning both the regular and accidental or irregular constituents, there are no less than six, to wit,—1. Particles more or less spherical, remarkable for their minuteness, paleness, and uniformity of size; they are about $\frac{1}{30000}$th of an inch in diameter, and constitute the molecular base of the chyle; these we call the primary molecules of the chyle. 2. Darker, unequal-sized molecules, so variable in this respect that they are commonly between $\frac{1}{20000}$th and $\frac{1}{6000}$th of an inch in diameter; these we designate the secondary molecules of the chyle. 3. Larger oil-like globules, from $\frac{1}{6000}$th to $\frac{1}{1800}$th of an inch in diameter. 4. The common chyle-corpuscles, having an average diameter of $\frac{1}{4370}$th of an inch, and resembling closely those of the thymus fluid and of lymph. 5. Pale cells, about $\frac{1}{2800}$th of an inch in diameter, and like those so well known in the blood. 6. Red corpuscles, generally about a third smaller than those in the blood, often granulated, indented, or notched, and then not prone to run together into piles as those of blood do. Of these, the molecular base, the darker and more unequal-sized or secondary molecules, the larger oil-like globules, and the common chyle-corpuscles, occur throughout the lactiferous vessels, though all but the molecular base may be very scanty in the most distant lacteals; while the pale cells and red corpuscles are less frequent, and commonly do not exist at all in the peripheral lacteals. Particular descriptions of all these corpuscles will be given as we proceed.

FIG. 21.

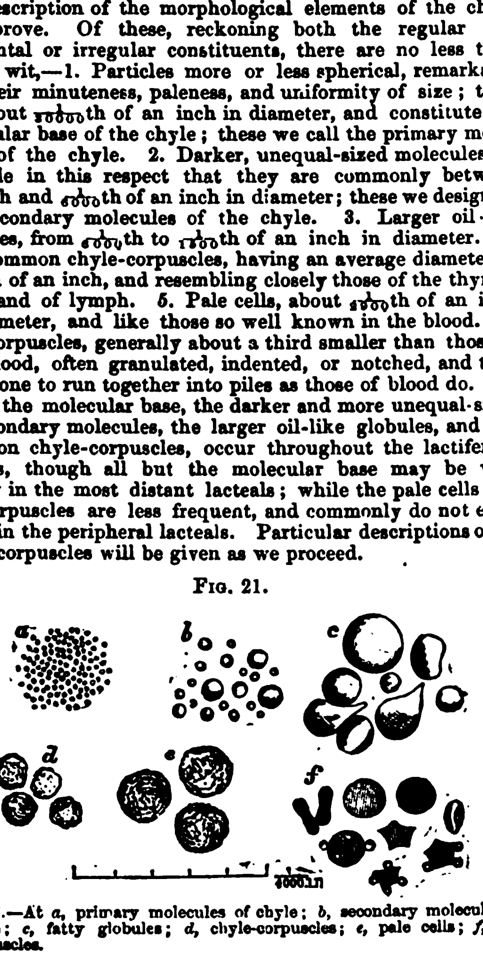

FIG. 21.—At *a*, primary molecules of chyle; *b*, secondary molecules of chyle; *c*, fatty globules; *d*, chyle-corpuscles; *e*, pale cells; *f*, red corpuscles.

Molecular Base.—And first, as the most important and fundamental of all, of the molecular base. It is this that gives the characteristic whiteness and opacity to the chyle of man, carnivora, and some herbivora, in which I have chiefly examined it; and no other animal fluid whatever has such a base, though, as we shall presently see, it occurs in the latex of certain vegetables, as Cichoriaceæ. Particles not distinguishable, either chemically or physically, may be seen more or less abundantly in lymph, the thymus-juice, and other fluids, but never in sufficient quantity to resemble the molecular base of the chyle. In a former Lecture we showed that the opacity and colour of the thymus-juice are due to an abundance in it of corpuscles identical with those in the juice of the lymphatic glands; but not so the chyle, the whiteness of which is owing entirely to the molecular base, and so may even be most remarkable (as figured and described in the App. to "Gerber's Anatomy") when very few or even no chyle-corpuscles or nuclei are present, as is the case also in the latex of vegetables.

FIG. 22.

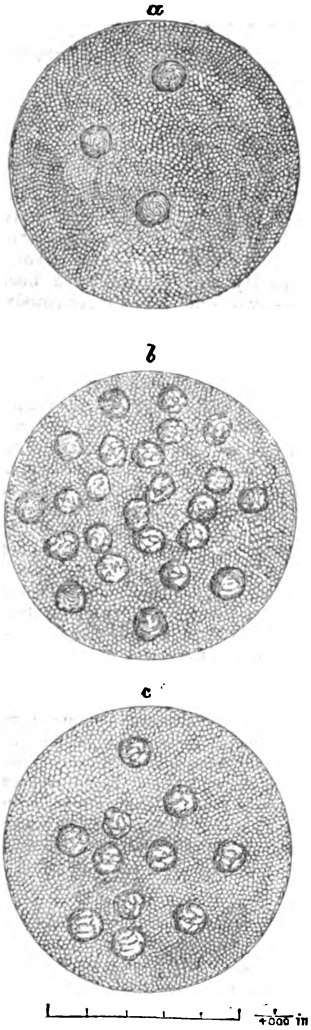

FIG. 22.—Molecular Base and Corpuscles of Chyle. At *a*, from a lacteal on the intestine; *b*, from a mesenteric gland; *c*, from the receptaculum chyli. From a man.

The particles of this molecular base are so minute and faint that they cannot be discriminated without good instruments and favourable illumination; wanting such appliances, the molecular base will only appear like a semi-transparent, uniform, greyish ground, or cloudiness, in thin layers of the chyle viewed by transmitted light; but, when once realised, the molecular base is so characteristic that it will no longer be possible to confound it with anything else. The globules of animal milk, and of the latex of some plants (as Convolvulaceæ), and to which the colour and opacity of those fluids are also due, present a definite outline, refract the light strongly, are inclosed in a pellicle—the haptogen membrane of Ascherson—and, above all, are not only generally larger than the equal-sized particles of the molecular base of the chyle, but are remarkable for their inequality of size. The diagnostic characters of the molecular base are therefore very plain and distinct. The particles composing it appear to be spherical, like those of milk and of the supra-renal bodies so far. But, as we have just said, the faintness or very low refracting power, uniformity and minuteness of size, together with their abundance being so great as to form the base or bulk to which the milky appearance of the chyle is owing, are the true physical characteristics of the molecular base and particles composing it; and the chemical diagnostics, as we shall soon see, are little less distinct and valuable.

How truly diagnostic the molecular base is of the chyle was well shown in a case which occurred during the latter part of the year 1842, in the practice of the late Mr. Bransby Cooper, as related to me by the late Professor Quekett. The patient, a middle-aged man, had an abscess in the loins, which became a fistulous opening that could not be healed, and from which a milky-looking fluid flowed at times in considerable quantity. Mr. Cooper sent some of it to an eminent chemist for analysis, who reported it to be composed chiefly of an oleaginous matter with a mixture of albumen; and so it was supposed to be a result of some liquefaction, degeneration, or emulsion of the fatty substance, especially as Mr. Cooper could see no pus globules, but only a greyish matter or cloudiness, without any distinct corpuscles, under the microscope. At last he took some of the fluid to Mr. Quekett for examination, who immediately pronounced that "it was like no other animal matter but the chyle, as it was mainly composed of exactly the same particles which had lately been described and figured by Mr. Gulliver as the molecular base of that fluid." Afterwards, the case was watched with more interest, when the fluid was always found to flow more plentifully during the height of digestion, as, indeed, the patient had often remarked. And he further asserted, what was observed to be true by Mr. Cooper, that, when the flow of the fluid was thus copious, its abundance would be regularly and quickly increased by a draught or two of good porter,—a fact which we may leave to be dealt with by those gentlemen who assert the uniformly injurious effects of all fermented liquors. Both Mr. Quekett and Mr. Cooper concluded that there must, in this case, have been some fistulous communication with a part of the lacteal system, most likely with the receptaculum chyli; and the accuracy of this opinion scarcely admits of a doubt.

The particles composing the molecular base of the chyle are the first, most elementary, and universal organic precipitate or secretion in that fluid, and are its fundamental or essential morphological element; they may be seen within the cells of the intestinal villi, and so are not a mere emulsion, during the greatest activity of digestion, and at that period constitute the characteristic base of the chyle throughout the lacteal system. But though this base is so abundant during the height of digestion, it is far otherwise when digestion is less active and during periods of fasting. Then the fluid in the receptaculum chyli and thoracic duct becomes thinner and poorer, opaline and semitransparent, or even nearly or quite colourless; and all this is owing entirely to the more or less diminution in the quantity of the molecular base. It is in the poor, nearly transparent and greyish chyle that the particles of the molecular base are scattered so thinly throughout the fluid as to admit most easily of an examination of their form. This appears to be more or less spherical; and in this thin chyle they regularly exhibit those molecular motions, described by Robert Brown in various minute particles, both of organic and inorganic substances.

As to the question of whether the particles of the molecular base possess a pellicle, I have never been able to demonstrate such a part, though it might be inferred with probability that they acquire an albuminous coat soon after their formation; and, considering that they are of a fatty nature, and float in a fluid containing albumen, such an inference has been generally adopted rather on analogical than demonstrative grounds. Their extreme minuteness must always make it very difficult to see whether they have or have not any sort of investing membrane or capsule. The action on them of cold ether and of water would appear to be most favourable to the view that the molecules are a peculiar form of fatty particles destitute of any envelope, though, no doubt, as they increase in size and begin to enter into certain formations they may acquire the haptogen membrane. By the ether the molecular base of the chyle is instantly and completely dissolved, and the solution when evaporated leaves a greasy stain on paper. Not a particle of the molecular base remains for a minute after the action of ether. The chyle, or rather this ethereal solution of the molecular base, becomes transparent; yet the proper chyle-corpuscles—and which are cell-nuclei—remain unaltered therein. Now, ether has no such action on milk, for not only do the proper globules of this fluid remain perfect in the ethereal mixture, but its opacity is no more affected than it would be by the addition of so much water; and ether is equally inert on the like unequal-sized molecules of the blood and chyle and of the supra-renal body. This higher order of molecules—our secondary molecules—has certainly, then, a protecting albuminous coat, the haptogen membrane. And water, which only separates them, causes those of the molecular base of the chyle—our primary molecules—to run together into larger fatty globules. The effect of other reagents on the molecular base is such as might be expected from the account already given of its nature. Little or no change is immediately produced on it by the alkaline and earthy salts, nor by solutions of potass and of ammonia; neither by acetic, citric, tartaric, and muriatic acids, though the acetic acid often clusters the molecules together into clumps more or less opaque.

The molecular base of the chyle exists in the blood in large quantity about the time when digestion is nearly or quite complete, and then may form one of the varieties of the so-called milky serum, which is quite different from those varieties of whitish serum which depend on disease. The molecular base being specifically lighter than either of the three proximate parts of the blood, will, of course, tend to float to the top, where it may be observed on blood abstracted at the period named, whether the blood be taken from the arteries or the veins ("Gerber's Anat.," App., p. 90). I have sometimes seen the molecular base on the blood before coagulation, often after coagulation and before the separation of the serum, and still more frequently on the surface of the serum subsequent to its separation from the clot. Indeed, more or less of the molecular base regularly appears on the blood abstracted at the proper time for the purpose, especially in young animals—as children, kittens, puppies, colts, and calves. Thus, then, as the molecular base occurs in a free state both in arterial and venous blood, it results that it is not all necessarily assimilated or used, either chemically or morphologically, before its passage through the lungs, and that even afterwards it does not immediately disappear.

Analogies and Homologies.—We have already noticed that the liquor chyli of animals has its equivalent in the liquor laticis of vegetables. The molecular base of animal chyle has also its equivalent in the latex of certain vegetable orders, as Papaveraceæ, Campanulaceæ, and Cichoriaceæ. This is an interesting fact in relation to the import and significance of the molecular base; and when we have described the larger and more unequal-sized or secondary molecules of the chyle, we shall show that these, too, have their equivalent in the latex of other vegetable orders, as Convolvulaceæ. But these equivalents are not throughout and in all points exact and invariable. Thus, while chyle from the thoracic duct regularly coagulates spontaneously, the latex of plants often fails to do so at all; this failure being regular in some orders, as Euphorbiaceæ, and occasional only in others, as Cichoriaceæ. In the juice of the spurges, there are well-known staff-like bodies of starch ("Ann. Nat. Hist.," March, 1862), which do not occur in the other orders; and the quantity of fibrin in the juice of such plants as the dandelions, nippleworts, and hawkweeds, being most abundant during the greatest activity of growth, is probably affected by season. Besides, the liquor laticis of these Cichoriaceæ is regularly coagulated by water at the temperature of the air, while the liquor chyli shows no such change when mixed with water; and, indeed, the only animal matter known to me, except the semi-fluid contents of nerve-tubes, as being thus susceptible of coagulation, is the albuminous part of the ova of fishes and batrachians. But these minor variations can scarcely be considered sufficient to affect the validity of the main conclusion; for no physiologist has ever questioned the fact that the albumen of the fowl's egg, which is not thus coagulable by water, is the equivalent of the albumen of the ova of fishes which is coagulable by that fluid.

And hence we arrive at the significant fact that the first or early chyle is so far a vegetable substance as to afford one of the most remarkable equivalents of the juice of plants hitherto displayed in the fluids of the animal kingdom. The liquor chyli of the commencing inferent lacteals is truly the equivalent of the liquor laticis. Both these liquids sometimes fail to coagulate spontaneously; both of them, when they do coagulate, may merely assume a structureless appearance, though in both the clot may exhibit an intimate structure of fibrils. And the molecular base, which has only been demonstrated a few years since as the essential characteristic of the white animal chyle ("Gerber's Anatomy," p. 56, App. p. 89, Figs. 274—287), is now shown as an equivalent so exact of that base in the vegetable latex, that it would be difficult, if not impossible, to perceive any difference between their peculiar morphological characters. Thus, then, the newest chyle is truly the homologue of the latex of certain plants, as Cichoriaceæ; but not so precisely of that different variety of latex which occurs in other orders, as Convolvulaceæ, as will be shown in the next and concluding Lecture.

ORIGINAL COMMUNICATIONS.

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A SERIES OF EXPERIMENTS ON DIALYSIS.

BY
JOHN BARCLAY, M.D., and ANGUS FRASER, M.D.,
Assistant-Professors in the University of Aberdeen.

The following series of experiments was instituted with the view of ascertaining how far the process of dialysis, as proposed by Professor Graham, can be relied on for the separation of poisons from organic matter. The apparatus used was the glass dialyser of Professor Graham. On this dialyser the mixture containing the poison was placed, and the whole suspended in a porcelain dish containing eight or ten fluid ounces of distilled water. At first the mixture was allowed to remain in the dialyser in contact with the diffusate for forty-eight hours, but it was soon discovered that in half that time as distinct evidence of the presence of the poison was obtained, and less obscured by the presence of organic matter.

The poisons experimented on were corrosive sublimate, arsenious acid, sulphate of copper, acetate of lead, tartar emetic, strychnia, laudanum, and muriate of morphia.

I.—CORROSIVE SUBLIMATE.

1. Half a grain was dissolved in an ounce of distilled water, placed in the dialyser, and allowed to remain for forty-eight hours, at the end of which time the diffusate was removed and concentrated; sulphuretted hydrogen gas was then passed through the concentrated solution, when a copious black precipitate fell.

2. The dialyser from the last experiment had added to it a few drops of pure hydrochloric acid, and was suspended in a fresh diffusate for seventy-two hours. On concentrating the diffusate and passing sulphuretted hydrogen gas, a slight brown precipitate fell.

3. Half a grain, dissolved in distilled water and mixed with about half an ounce of white of egg, was placed on the dialyser and allowed to remain for forty-eight hours. On concentrating, acidulating, and passing sulphuretted hydrogen gas, no precipitation took place.

4. The dialyser from experiment 3 was suspended in a fresh diffusate for seventy-two hours. On concentrating, acidulating, and passing sulphuretted hydrogen, no precipitation took place.

5. Half a grain, dissolved in water and mixed with about half an ounce of milk, was placed on the dialyser, and allowed to remain for forty-eight hours. On concentrating, acidulating, and passing sulphuretted hydrogen gas, no precipitation took place.

6. The dialyser from experiment 5 had added to it a few drops of pure hydrochloric acid, and was suspended in a fresh diffusate for forty-eight hours. On concentrating, acidulating, and passing sulphuretted hydrogen, a tolerably copious black precipitate fell.

7. A rabbit was poisoned with an unknown quantity of bichloride of mercury. The stomach and contents were cut up into small fragments and reduced to a pulp by the addition of distilled water and hydrochloric acid. This mixture was placed on a dialyser and allowed to remain for forty-eight hours. The diffusate was then concentrated, and sulphuretted hydrogen passed, when a black precipitate fell.

8. The dialyser from experiment 7 was suspended in a fresh diffusate, and allowed to remain seventy-two hours. On concentrating the diffusate and passing a stream of sulphuretted hydrogen, a slight black precipitate fell.

9. The liver, lungs, and heart of the rabbit were cut up, and, along with some blood, reduced to a pulp by the aid of distilled water and hydrochloric acid. The mixture was placed on a dialyser, and allowed to remain for forty-eight hours. On concentrating the diffusate and passing sulphuretted hydrogen gas, a slight black precipitate fell.

II.—ARSENIOUS ACID.

With this poison the same experiments were performed as with corrosive sublimate, and the results were as follow:—

1. On concentrating and acidulating the diffusate obtained from the simple solution of arsenious acid placed in the dialyser, hydrosulphuric acid gas gave a copious lemon-yellow precipitate.

2. On similarly treating the second diffusate from the last dialyser, a considerable yellow precipitate was obtained.

3. In the case of the mixture with white of egg, a copious yellow precipitate was obtained.

4. In the case of the second diffusate from the mixture with white of egg, a good yellow precipitate fell.

5. The diffusate from the mixture with milk, on being concentrated and acidulated, gave, on passing sulphuretted hydrogen, a copious yellow precipitate.

6. The second diffusate from the mixture with milk being similarly treated also gave a distinct, but slight, yellow precipitate.

7. The stomach and contents of a rabbit poisoned with arsenious acid, treated like those of the rabbit poisoned by corrosive sublimate, gave a diffusate, which, on being concentrated and saturated with sulphuretted hydrogen gas, gave a distinct yellow precipitate.

8. The second diffusate from the stomach and contents of the rabbit, being treated in a like manner, gave a slight yellow precipitate.

9. The diffusate obtained from the liver, lungs, and heart of the above rabbit gave, with sulphuretted hydrogen, a distinct yellow precipitate.

III.—SULPHATE OF COPPER.

As with bichloride of mercury and arsenious acid, this substance was experimented on alone, with white of egg, with sweet milk, with the stomach and contents of a poisoned rabbit, and lastly with the liver, lungs, and blood of the same animal.

1. With the copper alone, a copious brownish black precipitate was obtained.

2. In the second diffusate from the same dialyser a brown precipitate fell.

3. In the diffusate from the white of egg and copper mixture, a very slight brown precipitate.

4. In the second diffusate from the above mixture (after acidulation) no precipitate.

5. When the sulphate of copper was mixed with sweet milk, only a slight dark brown precipitate was obtained from the diffusate; but

6. A copious brown precipitate was obtained from a second diffusate after the contents of the dialyser had been acidulated with hydrochloric acid.

7. When a rabbit was poisoned, the first diffusate from the stomach and contents gave a copious deep brown precipitate.

8. The second diffusate from the stomach of the rabbit gave a copious deep brown precipitate.

9. When the lungs, liver, heart, and some blood were dialysed, slight but distinct evidence of the presence of copper was obtained.

IV.—ACETATE OF LEAD.

In the case of this poison, acetic acid was used for acidulation instead of hydrochloric acid; but otherwise the experiments here correspond numerically with the former sets. The results were as follow:—

1. A copious black precipitate of the sulphide of lead fell.
2. A slight black precipitate.
3. A very spare black precipitate.
4. No precipitate.
5. Slight brown discoloration of the concentrated diffusate on passing sulphuretted hydrogen gas, but no distinct precipitation.
6. Slight dark brown precipitate. (This was after acidulation of the contents of the dialyser.)

V.—TARTAR EMETIC.

In the series of experiments on this substance, the numbers also correspond with those used in the previous sets. Half a grain was used in each experiment:—

1. A copious golden yellow precipitate.
2. A slight golden yellow precipitate.
3. A copious golden yellow precipitate.
4. Copious precipitate.
5. Good precipitate.
6. Beautiful golden yellow precipitate.
7. Considerable precipitate.
8. Good golden yellow precipitate.
9. Slight golden yellow precipitate.

VI.—STRYCHNIA.

1. Half a grain of strychnia dissolved in spirits was mixed with half an ounce of distilled water, thrown on a dialyser, and allowed to remain for twenty-four hours in a diffusate of eight ounces of distilled water. On evaporating a few drops of the diffusate in a porcelain capsule, and testing with bichromate of potass and sulphuric acid, a beautiful play of the characteristic colours took place, showing very decidedly the presence of strychnia in quantity. The rest of the diffusate, after being evaporated and tested by the usual reagents, gave the same satisfactory results.

2. Half a grain of strychnia in solution was mixed with half an ounce of skimmed milk, and allowed to dialyse for twenty-four hours. On evaporating the diffusate to dryness on the water-bath, and testing with bichromate of potass and sulphuric acid, a faint flash of the characteristic play of colours was obtained. The taste of the diffusate was a most intense bitter.

3. Half a grain of strychnia in solution was mixed with some white of egg and distilled water, and dialysed for twenty-four hours as before. On evaporating and testing as usual several very characteristic reactions, indicative of the presence of strychnia, were obtained.

4. Half a grain of the poison in solution was mixed with an ounce of porter and dialysed for twenty-four hours. On testing the substance left in the basin after evaporation, a faint flash of blue colour was observed at one point, but this lasted for a very short time, and no other reaction at all indicative of the presence of strychnia could be obtained.

5. Differed from the last only in having added to the dialyser a few drops of pure hydrochloric acid. The result in this case was a play of the characteristic colours, faint and rapidly fading.

6. This was a repetition of experiment 2, the dialyser having, however, added to it a few drops of pure hydrochloric acid. The result was a very faint strychnia reaction.

7. This was a repetition of experiment 3, with the addition to the dialyser of some hydrochloric acid, when a tolerably good reaction was obtained.

8. The stomach and contents of a rabbit, which had been poisoned by a grain of strychnia, after being cut up into fragments and reduced to a pulpy consistence by the aid of hydrochloric acid and water, were dialysed for twenty-four hours. The result was that in two different parts of the basin faint flashes of the characteristic colours were obtained.

9. After subjecting the liver and blood of the rabbit to the same process, the results were negative.

VII.—TINCTURE OF OPIUM.

In each of the experiments on this substance half a drachm was the quantity used, and the time allowed in every instance for the mixture to dialyse twenty-four hours.

1. Mixed with water only and dialysed, the diffusate without evaporation gave a well-marked red colour with perchloride of iron.

2. When the laudanum was mixed with half an ounce of skimmed milk and dialysed, a well-marked red colour was obtained on adding perchloride of iron to the unconcentrated diffusate.

3. The last experiment was repeated, with the addition of hydrochloric acid to the dialyser, and here a distinct red colour was again obtained on adding the same reagent.

4. Mixed with a little white of egg and distilled water, after dialysing for twenty-four hours a diffusate was obtained, which gave without concentration a distinct red colour with the usual reagent.

5. The former experiment was repeated, with the addition of hydrochloric acid to the dialyser, and here good evidence was obtained of the presence of the poison in the diffusate.

6. In this experiment the usual quantity of laudanum was mixed with an ounce of porter and dialysed. The diffusate gave, on adding the reagent, a distinct reddish colour.

7. On repeating the former experiment, with the addition of a little acid, a good reaction was obtained.

VIII.—MURIATE OF MORPHIA.

In the experiments on this substance two drachms of the pharmacopœial solution were in each case used; the diffusates were, as in the previous sets of experiments, eight ounces of distilled water, and the time allowed for the substance to dialyse twenty-four hours.

1. The solution was mixed with two drachms of water and dialysed. On evaporating the diffusate to a small bulk, and adding nitric acid, a well-marked sherry-red colour was obtained.

2. Mixed with half an ounce of skimmed milk the diffusate

obtained, after dialysing for twenty-four hours, gave on adding the reagent a deep sherry-red colour.

3. The previous experiment was repeated with the addition of acid to the dialyser, and the result was a good reaction.

4. In this experiment the solution was mixed with white of egg, and the diffusate obtained gave with the reagent a good sherry-red colour.

5. The former experiment was repeated with the addition of acid, and a good yellow colour was obtained.

6. Here porter was the substance used from which to separate the poison, and the diffusate obtained gave, on the addition of strong nitric acid, a good dark sherry colour.

7. On repeating the former experiment, with the addition of acid, a good yellow colour was obtained.

Remarks.—From the foregoing experiments it would appear that, of the poisons operated on, arsenious acid and antimony dialyse best; for it will be seen that in every instance very satisfactory proof of their having passed through the membrane was obtained. In the case of corrosive sublimate, the results were negative when the substance was mixed with white of egg, both before and after acidulating the contents of the dialyser; and, where the mixture was with milk, a like failure was experienced without the addition of acid, though a very good precipitate fell in the diffusate obtained after acidulation. Sulphate of copper did well in every case, with the exception of that where it was mixed with albumen, the precipitate obtained before acidulating the mixture being slight, and the results negative after acidulation. The same remarks apply to acetate of lead. With regard to strychnia, very unsatisfactory evidence of its presence in the diffusates was obtained in every case where it had been set to dialyse mixed with organic matter, for even when the diffusates tasted intensely and characteristically bitter, either very indistinct proof, or no trace at all, of the presence of the substance was obtained by the application of the usual colour-tests, obscured as it was by a greater or less amount of organic matter always accompanying it. In every instance where porter was used, a very large quantity of organic matter came through the dialyser, and even more when the stomach and contents or the liver and blood of a poisoned rabbit were dialysed; so that, in the case of strychnia, little reliance could be placed on the results obtained, when evidence of its presence was sought for in either of these mixtures. In the diffusate from porter, from the stomach and contents, and from the liver and blood of rabbits, so much organic matter came through, that on evaporating to dryness on the water-bath, a syrupy mass was in each case left as a residue, and very brown in colour, thus rendering it impossible to apply the strychnia colour-tests, except on the parts of the dish high above where the organic matter reached, and there it was that the faint flashes of the characteristic play of colours were seen when testing for this substance. Laudanum always gave good proof of its presence by responding to the usual test for meconic acid, and that with either no or very slight concentration of the diffusate; and the same might be said of muriate of morphia. The addition of acid to the contents of the dialyser seemed in most cases not only to hasten the process of dialysis, but also to lessen the amount of organic matter which passed through. In no case does it seem that the whole of the substance set for dialysis passes through the parchment membrane, for on submitting the contents of a dialyser to Reinsch's process, which had at first contained half a grain of arsenious acid in solution, and had been exposed to two separate diffusates—to the first for forty-eight and to the second for seventy-two hours,—a very abundant coating of metallic arsenic was deposited on the copper.

CASE OF

LEUCOCYTHÆMIA (LYMPHATICA).

By H. STRANGWAYS HOUNSELL, M.D., M.R.C.P.,
Physician to Torbay Infirmary, etc.

THE following case will, I believe, be an interesting addition to the present history of this curious and comparatively rare disease:—

Thomas M. was admitted an in-patient of the Torbay Infirmary, under my care, on September 28, 1863.

General Appearance.—He is four feet seven inches in height, 18¼ years of age, of very slender make, and would appear to a casual observer scarcely more than 12. The sexual organs are very small, and there are no signs of puberty. He has grey eyes and brown hair, and singularly old, almost "wizen," features, and cachectic, muddy appearance. He is very anæmic, pupils dilated, skin harsh and dry, and has a quick, precocious style of speaking; pulse 110 to 120; no apparent enlargement of spleen or liver; abdomen not tumid. The submaxillary and cervical glands are much enlarged, hard as marbles, and form a complete chain or necklace round the throat—(size of taws). The occipital, axillary, and inguinal are also very large, especially one gland, size of walnut, in right axilla, and two large ones, about same size, in left groin, besides many smaller ones. The glands both below and above Poupart's ligament are affected.

History.—His parents state that he was a fine baby, and very healthy till four years old, when he had small-pox, of which he has very evident traces. He recovered from this, however, and remained in good health until nearly fourteen, when he was put to work in a copper mine in Cornwall, where it seems he caught a severe cold, and has never been well or grown since. The glands then began to enlarge, and he has been treated for this, and cough, diarrhœa, etc., by several Medical men. Sea-weed poultices were at one time applied to his glands, with some good effect.

Examination.—Chest flat, of small capacity; respiration feeble, and expansion imperfect. On percussion, general dulness, especially at apices, gave evidence of tubercular deposit. On auscultation, respiration generally weak; at apices, harsh and tubular, with softening (?) sounds below right clavicle; and between third and fourth ribs signs of a small cavity. The liver dulness was prolonged slightly beyond the false ribs; the spleen could not be discovered to be enlarged on careful palpation. Enlarged mesenteric glands were felt on deep pressure. Urine fair in quantity, sp. gr. 1020, deposits lithates abundantly, acid reaction, and contains no albumen. He passes about 200 grains of urea per diem, which seems a very fair quantity for a lad of his size. His tongue rather furred; pulse 110; he suffers from occasional diarrhœa; his appetite is capricious; and he complains of obscure pains in his head. Blood drawn at different times from the tips of his fingers showed the red corpuscles small and less abundant than usual. The white corpuscles, or bodies with same appearance, were present in great numbers, which was particularly evident on adding acetic acid, when the field was studded thickly with their nuclei. Attempts were made often to count the relative number of white corpuscles, but with only partial success. Groups of six and ten were often seen together; at one examination the impression of three careful observers was that they were about one to fifteen of the red.

He was put upon a full diet of milk, eggs, cream, beef-tea, etc.; was ordered tepid bath and oil inunctions, tonics, and occasional astringents as the diarrhœa might require, and he took for a time the phosphoretted oil with benefit. Under this treatment he certainly improved, his emaciation diminished apparently, his appetite became more regular, and there was a marked diminution in the size of some of the glands, when, on October 25, being subjected to scarlatinal contagion (through some visitors from a house in which the disease raged), he had a smart attack of fever, with tonsillitis, and was removed into the fever ward. No rash appeared, but pneumonia supervened, with great prostration; dulness over both lungs, posteriorly almost universal, especially at left base, where no respiration could be heard; above and in the right base was small and large crepitation; there was abundant rust-coloured sputa. Under careful treatment, viz., poultices, salines, and carefully regulated nourishment and stimulants, he was getting over the attack, when, on the tenth day, with considerable desquamation of the cuticle, head symptoms appeared.

On November 4, I see by note-book, his appetite failed, and towards evening he was slightly delirious, refusing food, and talking nonsense.

On 5th, much the same; a tendency to diarrhœa, which was not interfered with. No albumen in urine.

On 7th, much the same; passed about a pint of concentrated urine, specific gravity 1030, highly acid, depositing lithates on cooling. This specimen furnished 11 52 grains of urea per oz. He lingered on until the 13th, taking nourishment from time to time as it was given him. A blister had been applied inter scapulas, cold lotion to shaved scalp, and a leech to temple.

On 13th he was quite comatose when I saw him, lying curled up on left side, with contracted pupils and divergent strabismus; small, rapid, almost imperceptible pulse; face rather livid, occasional convulsive twitchings, clenched fists, closed teeth, and feeble respiration; fæces and urine had passed involuntarily for several days; a little collected showed no albumen. He died at 10·30 p.m.

Sectio Cadaveri Fifteen Hours after Death (*from Notes at the time by Dr. Woodman, the House-Surgeon*).—Rigor mortis strongly persistent; body still sensibly warm, even on surface; considerable desquamation of cuticle; a nodular body can be felt in right hypochondrium, which feels like an enlarged mesenteric gland (and proved to be so); otorrhœa on right side. The scalp veins were rather full; dura mater rather more than normally adherent to skull-cap, but no recent lymph on surface. Pacchionian bodies numerous; vessels of pia mater turgid. Brain rather more than usually firm as low as lateral ventricles; numerous puncta cruenta, and considerable quantity of slightly bloody serum in both lateral ventricles, but choroid plexus very small and anæmic; nothing special in corpora striata or optic thalami. Base of brain somewhat softened; tubercles on floor of fourth ventricle; some recent lymph and puriform fluid on arachnoid at base of brain. On opening thorax, both lungs were found firmly adherent to the thoracic parietes by very firm adhesions, evidently of long standing; a moderate-sized cavity in anterior of apex of right lung; both lungs thickly studded with tubercles and congested, especially left, which scarcely crepitates at all, and base of which was completely carnified. Heart normal; a small quantity of serum in pericardium, and a yellow (decolorised) clot in aorta about five inches long. Liver weighed 2 lb. 4 oz., rather large, and pale, and nutmeggy. Spleen weighed 3½ oz. only, was moderately firm; three or four masses, about size of peas, of same naked-eye characteristics as enlarged glands. Kidneys weighed nearly 5 oz. each, were rather congested, and appeared large for their weight, but cut firmly, and showed no discrepancy in relation of cortical and medullary substance. Supra-renal capsules appeared free from deposit. Mesenteric glands and lumbar ditto enormously enlarged, many of them size of walnuts; naked eye characteristics yellow, easily cut material, some rather softened in centre. Axillary and inguinal glands as in life, and as mesenteric, but not softened.

Microscopic Examination.—The deposit in the brain was clearly tubercular. A thin section of liver showed incipient fatty degeneration, a fine halo of oil globules being discernible near the circumference of each lobule. Scrapings from the enlarged lymphatic glands showed the characteristic granular or lymph cells, and a few oil globules. The deposit in the spleen had the same appearances as the enlarged lymphatic gland tissue, but in addition there were numerous small delicate cells with nuclei indistinct until acetic acid was added, when they became more evident.

Remarks.—In this case of leucocythæmia, or leucocytosis, the whole system of lymphatic glands throughout the economy were greatly enlarged, whereas the spleen, although containing several small masses of morbid deposit almost identical with glandular tissue both on external and microscopic examination, was not increased in size nor impaired in texture as far as I could make out. The liver was large for the size of the lad, rather pale, of light specific gravity, and was in a state of incipient fatty degeneration, but there were none of the dirty white granules noticed by Uhle and Virchow. The kidneys were greatly hypertrophied, but apparently healthy in structure and unimpaired in function during life, as evinced by the amount of urea eliminated. The urine, although constantly examined, never contained albumen, and under the microscope showed nothing abnormal. The whole symptoms and appearances of this disease lead me to identify them with the hectic of purulent contamination, as, I believe, by the enlarged glandular system sending an abundance of lymph corpuscles into the blood, some possibly by further oxidation to be converted into pus cells. I cannot hold the view that these corpuscles are ever to be converted into red discs, nor do I think they are formed at their expense.

Oakfield, Torquay.

UNIVERSITY OF LONDON.—The Council have intimated that the next half-yearly examination for matriculation in this University will commence on January 11. In addition to the metropolitan examination, a provincial pass examination is to be held in the Town-hall, Leeds. The matriculation examination is accepted by the Royal College of Surgeons of England in place of the preliminary examination otherwise imposed on candidates for its fellowship.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CONGENITAL SYPHILITIC DISEASE OF THE TESTICLE AND MUCOUS MEMBRANE.

(Under the care of Mr. THOMAS BRYANT.)

THOMAS P., an infant, 16 months old, was brought to Mr. Bryant at Guy's Hospital, on September 3, 1863, with an enlargement of the right testicle and condylomata at all the orifices of the mucous tracts. It was the first child of a woman whose husband had had the disease some years prior to their marriage, and the mother appeared quite healthy. At birth the nurse observed that the right testicle was very large, but no other symptoms were present. Two months subsequently, however, the mouth became sore, and the same disease appeared at the anus and around the prepuce. These symptoms not subsiding, she brought the child to Guy's.

When seen, the right testicle was uniformly enlarged, and was one inch in its longest diameter; it was smooth and hard, and manipulation did not apparently produce pain. The mouth, anus, and prepuce were the seat of large patches of condylomata. The child was apparently well nourished. Hyd. c. cret. gr. i., and pulv. sod. co. gr. iii., were given twice a-day, and black wash locally applied with marked and rapid improvement, the condylomata healing, and the enlargement of the testicle subsiding; a complete cure being effected in five weeks.

PTOSIS DEPENDING UPON SYPHILITIC DISEASE OF THE PARTS AROUND THE THIRD NERVE.

(Under the care of Mr. THOMAS BRYANT.)

Francis L., a healthy man, aged 23, applied to Mr. Bryant with complete ptosis of the left eye, of six days' standing. It came on gradually during those few days, and was accompanied with an occasional shooting pain through the left side of the head. He had had a chancre two years previously, which had been obstinate in healing, and had been followed by some eruption of the skin and sore throat, for which he had taken mercury. For some weeks also he had been suffering from a so-called tertiary ulcer on the leg, which was, however, nearly well when the present affection made its appearance. The iodide of mercury was given in one-grain doses twice a-day with some iodide of potassium, and in two weeks the ptosis had nearly gone, and in another seven days all symptoms had subsided, and when seen two months after he was quite well.

DUMBNESS AFTER DEAFNESS FOLLOWING SCARLET FEVER.

(Under the care of Mr. THOMAS BRYANT.)

The following case of dumbness, which came on gradually after a disease of the ears following scarlet fever, is well worthy of a short record. It occurred in a boy, aged 9, who was brought to Mr. Bryant, at Guy's Hospital, in February, 1863. He was a healthy-looking and intelligent youth, but was quite unable to speak, with the exception of a few monosyllables, such as—and, to, yes, and no. When an infant, he was quite healthy, and, up to four years of age, was as advanced as any other child, and could consequently talk freely and without difficulty. When 4 years old he was seized with scarlet fever, and this was followed by disease of both ears, and complete deafness. Since that date he has gradually been losing, word by word, his power of speech, and can now only make himself understood by signs.

It is unnecessary to make any remarks upon this case, but amongst other things it proves how the memory of the past gradually fails unless it be kept up by exercise and renewed impressions.

INFLAMMATORY THICKENING OF THE STERNO-CLEIDO-MASTOID MUSCLE.

(Under the care of Mr. THOMAS BRYANT.)

Case 1.—Mary G., aged four weeks, came under Mr. Bryant's care, at Guy's Hospital, on September 3, 1863, with an enlargement of the whole of the right sterno-cleido-mastoid muscle, which had been observed three days after birth. The confinement had been a tedious one, and the child presented by the breech. Fomentations were applied, and by October 8 all symptoms had disappeared.

Case 2.—Ada F., aged 8 weeks, came under Mr. Bryant's care on August 17, 1863, with the same disease affecting the left sterno-cleido muscle. This child was also born by a breech presentation. By fomentations also the symptoms disappeared in three weeks.

PARALYSIS OF THE FACIAL NERVE FROM DISEASE OF THE INTERNAL EAR IN A CHILD ONE YEAR OLD.

(Under the care of Mr. THOMAS BRYANT.)

Charles A., aged one year, was brought to Guy's Hospital in September last, and came under the care of Mr. Bryant. When one month old, after an attack of inflammation of the right ear, attended with the discharge of pus, a complete paralysis of all the muscles of the right side of the face appeared, and this has continued ever since. The glands also of the neck began to enlarge, and when coming under observation these were suppurating. The paralysis of the facial nerves was most complete, rendering the expression of the child hideous to a painful degree when crying or laughing. The discharge from the ear was also offensive.

There could be no doubt about the nature of the disease. Inflammation, and probably necrosis of the internal ear, involving the seventh pair of nerves. The appearance at such an early date is a point of interest.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

BRIGHT'S DISEASE—MENINGEAL APOPLEXY—AUTOPSY.

(Under the care of Dr. RAMSKILL.)

JOHN S., aged 42, admitted August 14, has been ill six months. He is single, tall, and spare; has not suffered from gout, rheumatism, nor syphilis. He was quite well until he met with an accident at sea six months ago. The mast of the ship fell in a gale, and one end of it caught him, as it rebounded, across the small of the back, striking most severely on the right loin. The same day he had headache and giddiness. Fourteen days after the accident ptosis came on; it got well in about four months, and then he saw things double. He also found himself quite deaf on the right side. Has lost power of speech for three or four hours together on three different occasions during the past two months. At present he has slight paralysis of the internal rectus of the left side; the tongue deviates to the left side, but there is no other paralysis of face, either motor or sensitive. Upper extremities unaffected. Immediately after the accident he felt his legs numb; often had pins and needles in them; occasional cramp in both calves. These symptoms continue. He feels as "if his legs did not belong to him." They are very cold on the warmest day; they have not wasted. Can walk but feebly, and the slightest touch would knock him down; can walk in the dark, but with great difficulty. Knows when his feet are touched. Has no sensation of a cord tied round the abdomen. His movements seem characterised rather by extreme feebleness than by loss of sensation or of muscular sense. Intelligence slow but good; appetite poor.

Iodide of potassium was given, with bark and rhubarb; he improved very much till September 1, when he complained of a cramping pain round the loins, for which he was ordered to bed; poultices were applied, and purgatives administered.

On the morning of October 17 he was found in a fit, and from that time was quite unconscious to his death. He was seen by Dr. Hughlings Jackson during an attack of convulsions, about half an hour after the seizure, and then during the paroxysms the pupils were widely dilated. Dr. Jackson examined the eyes by the ophthalmoscope, and found the retinal arteries very small, and the veins exceedingly large and quite black. When the convulsive seizure had passed off the pupils were too small to allow him to illuminate the fundus, so that atropine was used. When the pupils were fairly dilated, exactly the same conditions were found as during the paroxysm.

The post-mortem examination was made next day. There was an immense effusion of blood at the base; it had passed down into the spinal canal, and the ventricles also were nearly full of it. The precise seat of rupture was not ascertained, but it seemed certain that it was meningeal, as none of the brain substance was torn up or particularly softened. The kidneys were much diseased, and hence, no doubt, the liability to apoplexy.

Meningeal apoplexy, says Dr. Wilks, is the commonest form of apoplexy found with Bright's disease. It may be remarked that after death the veins on the surface of the brain were dark and large, as were the retinal during life, or rather during dying. The cord looked healthy, but it is now in the hands of Mr. Kesteven for microscopic examination on Lockhart Clarke's method. The results of this examination will be given, but the case is now reported as an interesting instance of apoplexy depending on Bright's disease.

THE ROYAL LONDON OPHTHALMIC HOSPITAL.

CASES OF AMAUROSIS IN CHILDREN.

[Communicated by Mr. HUTCHINSON.]

IN the following group of cases I have placed in juxtaposition some interesting examples of amaurosis occurring in children or young persons. With one exception (Case 1), all the cases are instances of what has been known as "cerebral amaurosis," since in none did the ophthalmoscope show disease of the deep tissues of the eyeball other than such as was, in all probability, secondary to central mischief. In this latter position white atrophy of the optic nerves, when symmetrical, must usually be held to stand. It is important that we should have the opportunity of comparing cases of this kind—and they are rare—with each other, more especially in the hope of arriving at more definite knowledge as to their true causes. It will be seen that in several of the following cases there were present at the time the eyes were failing other symptoms of cerebral disturbance, such as vomiting, pain in the head, etc., yet in none did these advance to a fatal termination, or even to such degree of severity as to make a diagnosis of the existence of a tumour beyond doubt.

It is interesting to note the history in some instances of a blow on the head at some period preceding the symptoms by a considerable length of time.

Case No. 1 is an exceedingly rare and exceptional one. The correct interpretation even of the ophthalmoscopic symptoms was very difficult. Since in each eye the vitreous body was hazy, it might seem to be scarcely one of amaurosis in the more restricted use of that term. That in this case also there are, however, atrophic changes in the optic nerves, consequent in all probability on central disease, I feel no doubt.

Case 1.—*Total Blindness in a Young Boy after a Few Days' Illness—Partial Recovery of Sight subsequently.*

John C., aged 6, was admitted September 7, 1863, when I took the following notes:—He is the eldest of three, all healthy. His mother states that all her children have had good health. This boy used to be stout and of good colour, but began to fall off about four months ago. He has passed great numbers of ascarides, and has taken many "worm powders." He has also suffered very much from toothache, and has done so for two years or more. He has often complained of headache, more particularly in the forehead. Appetite always good, and he has never had any vomiting. During the last few months he has lost flesh and colour very much, and has been languid and sleepy.

History of Blindness.—He complained of his head five weeks ago, and his mother got some medicine for him. The left eye was bloodshot. It began on Wednesday, and on Friday he was quite blind in both eyes. His father carefully tried him—on the Thursday he could see a little, and on Friday he could not tell light from darkness. Both eyes are stated to have been much inflamed, and he complained of pain in both. The first week of the attack he cried very much, on account of the pain in his head and eyes, but latterly he has seemed more comfortable. Both pupils are round and moderately dilated. He appears to have no perception of light. I had very great difficulty with the ophthalmoscope. In both eyes the conditions were similar, and a dull grey reflex in some positions of the eye, and a dull red one in others, were all I could make out. I obtained now and then, for a moment, glimpses of retinal vessels, but could not find either of the optic discs. The grey reflex appeared indistinctly to float. I had the assistance of a colleague, but neither of us could see the fundus. The boy's inability to fix his eyes increased the difficulty of the examination.

There is at present not the slightest redness of either globe; no iritic adhesions. He does not now complain of headache, but he appears sleepy and heavy. Head large. Some glands in the neck are a little enlarged.

The above notes were taken on September 7, 1863; he had been admitted at the Hospital on August 10, but I had not seen him. Soon after the later date his sight began to improve; the first thing he saw (having been quite blind for a month) was a dog running across his path. In the course of a month he improved greatly. On October 12, I examined him, and found that he could see to pick up small objects; he appeared to be short-sighted, but as he did not know his letters, and was withal very stupid, it was difficult to accurately test his sight. His mother says that he cannot see well except close to him, and that she dare not let him go out alone. Pupils of medium size, and very sluggish; with atropine the pupils dilated roundly, but not to a usual extent. I had again much difficulty in focussing the fundus. There were no striæ in the vitreous, but it seemed hazy, or only semitranslucent; I could easily find the optic discs, but could not bring them out in good definition; their margins were ill-defined, surfaces rather pale, and the arteries small. The conditions were exactly similar in the two eyes.

Case 2.—"Gastric Fever" lasting One Month, and attended by a certain degree of Stupor, with Squint, and Diplopia—Sudden Failure of Sight, ending in Total Blindness—White Atrophy of both Optic Nerves.

Esther E., a Jewess, aged 8, came under care September 12, 1861. Brown irides, brown hair, pale. She was reported by her mother to have been in good health until an attack of "gastric fever" ten months ago. This illness was attended by constipation. She was never during it quite confined to bed; was sometimes in a sort of stupor, but never actually delirious. During the illness she began to squint and to see double. The eyes were also, according to her mother's account, very prominent. Towards the end of a month she was steadily recovering, and could see fairly (but double), when "suddenly one day, in attempting to take a cup from the table, she lost her sight and became blind, seeing only mist."

September 12.—She has taken steel, etc., and has regained her strength, but the sight has not returned. Both optic discs bluish, exactly like round patches of bluish-white paint. Arteries very minute, and veins smaller than natural. These changes are advanced and symmetrical. Her pupils were of normal size, and slightly sensible to light before the use of atropine.

28th.—The pupils are again of normal size and equal; both move a little on sudden exposure to light, but are decidedly sluggish. Her amaurotic aspect is very marked; she is very pale. On further inquiry, I find that during her illness she never had much headache, no vomiting, nor ever any pain in her eyes.

Remarks.—It is more probable in this case that the girl had suffered from subacute inflammation of certain portions of the brain and its membranes, than that her illness was one of specific fever. Still it must be admitted that the history does not include several of the most frequent symptoms of such inflammation. It is possible that the stupor mentioned was nothing more than an extreme degree of that overpowering tendency to sleep which I have in many other cases noticed as a frequent precursor of the changes which result in amaurosis with white atrophy of the optic nerves.

Case 3.—Premature Menstruation—Entire Suspension of the Function for Five Months—Amaurosis—Return of Menstruation, and Partial Recovery of Sight.

Emily P., aged 12, was admitted in May, 1861. Rather fair complexion; florid. Has had good health. Infantile complaints, scarlatina, measles, etc., some years ago; nothing lately; she looks healthy, and is moderately stout.

She menstruated in November for first time, again in December, and again in January, each time rather profusely, and "regular to the day." Since January she has had no menstrual discharge whatever.

For a month or two past her governess has remarked that the girl appeared to be losing her sight. She had always been a little short-sighted, but not so as to prevent her having learnt to read pretty well.

During the last few weeks her mother says she has been "dull, stupid, and heavy-like;" wants rousing. Not too sleepy; eats well; sleeps well; no headache.

She has been kept at home from school for a fortnight, being quite unable to read.

I ascertained that she could not see to spell out No. 14. Holding it near, she could see letters of No. 16, but with much uncertainty. A little improved by concaves, but not much. Pupils of moderate size, and sluggish. Eyes equally defective, or nearly so; she considers her left the better one.

With the ophthalmoscope both optic discs were seen to be abruptly margined, somewhat irregular in outline, and surrounded with black pigment. Their surfaces were too white. The choroidal tissue very easily seen, the epithelium being deficient in pigment; the retinal arteries were small.

October 16, 1863.—At my request, the subject of this case was brought to me for examination, it being nearly two years since I had seen her. She is in fair health, but not well developed, and her mother complains that she is exceedingly heavy and low. Although she has menstruated regularly ever since she was under care, her appearance is not at all that of established puberty. She does not suffer from headaches, nor has she any special nervous symptoms. Whenever her menstrual periods are impending, her mother notices that she is more heavy, and that her sight seems worse. Her menstruation returned soon after her last attendance, and has never been interrupted since, and from the time it re-commenced her sight has remained in *statu quo*, or even a little improved. Her right eye is the better one. She can read No. 10 (Pica) at twelve inch distance, and spelling out the words. Both pupils are very large and extremely sluggish. With the ophthalmoscope the conditions seen are extremely interesting. The left optic disc is large, of a blue-white appearance, abruptly margined, and very conspicuous. Its surface is quite destitute of minute vessels. The central artery is much diminished in size, but all its branches can be easily traced, whilst its veins are large and full. In the right the same conditions exist in a less advanced degree. The arteria centralis is of better size; the veins are large. There are a few minute vessels in the disc itself. The latter is, however, as compared with a healthy eye, conspicuously white, and abruptly margined. There is a semicircle of black pigment at its edge. In both eyes the media are perfectly clear, and the fundus, excepting as regards the nerve and the retinal supply, is normal. In both the optic discs look a little pushed back or shrunken.

This case seems strongly to support the opinion that amaurosis with white atrophy may depend upon disturbed function of the sexual organs. The blindness began whilst menstruation was suspended, and its progress was arrested when the function was re-established.

Case 4.—White Atrophy of both Optic Nerves at the Age of Nine—Irritability of Temper almost amounting to Insanity.

John F., a boy aged 12, admitted on June 29, 1863. He had been blind two years. At the age of 9 he had a fall in jumping, and "sprained one knee and stunned himself." Before this he could see well; had learned to read, and was fond of it. It was twelve months after the fall before his sight was noticed to be failing. His sight failed rapidly, and eighteen months ago he was so nearly blind, and Mr. H., under whose care he had been, told his mother nothing more could be done. He now is quite unable to perceive light; "will put his hand in the candle," being unable to see anything.

He is a well-grown, healthy-looking boy. Pupils not materially dilated; irides lustrous. As his mother remarked, "no one, to look at him, would ever suppose that he was blind." Head well formed, excepting that the occiput was small; hearing good. He was exceedingly wilful in manner whilst under examination, and his mother stated that at times he was "scarcely himself," being exceedingly passionate. Before the blindness came on he had been very intelligent and tractable. There is no reason to suspect inherited syphilis. He has brothers and sisters who can see well.

I had great difficulty in using the ophthalmoscope, owing to his timidity and wilfulness. I got but a moment's glance at the optic disc. It was abruptly margined, and of a dead blue-white. The arteria centralis was very much smaller than natural; veins of normal size; the media were perfectly clear; choroid and retina normal.

Case 5.—Amaurosis after Scarlet Fever—Pain in the Head and Vomiting—Total Loss of Sight in about Three Weeks—White Atrophy of the Optic Nerves.

Susanna B., a stout, flabby, pale child, aged 10, was brought up from a village in Hertfordshire in September, 1863. In April last she had scarlet fever; was very ill; after it she had œdema of the legs, but not much. At this time it was first noticed that her sight was failing. "She seemed near-sighted." The left eye was the first affected. In about three weeks from the beginning she was quite blind. She has been quite blind now (Sept. 1863,) for four months. Whilst her eyes were failing she was much troubled with pain in her head, chiefly across the forehead, and also with vomiting. The pain would often last several days and nights, so that she could not sleep. The vomiting occurred once in every two or three days, not at any particular time. It was not noticed that she became weak or failed in muscular power; can still walk well. The pain and sickness have both ceased for the last six weeks. She is cheerful. Her hearing good, and she sleeps well. Total inability to perceive light. Pupils large, of equal size, and all but motionless. The left globe looks outwards; her aspect is amaurotic. She has no cough. Both her parents are living and healthy. She never had fits of any kind.

Ophthalmoscope.—Conditions in both eyes exactly similar; media perfectly clear; optic nerve very white; veins large; arteries very small; choroid orange red, but not very markedly so; no other changes.

Case 6.—Amaurosis with White Atrophy, possibly Congenital.

A little girl, aged 4, who had never suffered from any inflammation of the eyes, was brought to me for examination, in the belief that she was blind. Her mother thought that she had been blind almost from birth; she was a delicate child, and had always been so. Five brothers and sisters older than herself, all had excellent sight. She had been late in learning to walk and to speak, and was small for her age; but she was well fleshed, florid, and during the last year had enjoyed much better health than formerly. On examination, I found the optic discs blue-white, and their arteries very small. The veins were still of good size. She did not appear to have any perception of light.

Cases 7 and 8.—Congenital Amaurosis with White Atrophy in Two Sisters—Marriage of Consanguinity.

Two little girls, sisters, aged respectively 4 and 1½ years, presented most marked conditions of advanced atrophy of the optic nerves. Neither of them had had any material illness. Both of them had been blind from birth. Their parents were first cousins

(To be concluded.)

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Medical Times and Gazette.

SATURDAY, DECEMBER 12.

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POPULAR MEDICAL ERRORS.

WE proceed, lastly, to notice some of those popular Medical notions which involve so much credulity, so much ignorance, forgetfulness, or else wilful disregard of fundamental physical truths as to merit the title of superstitions rather than of errors. The evil results of such notions luckily bear an inverse proportion to their extravagance. The really mischievous notions are those everyday popular mistakes about diseases, remedies, matters of hygiene, etc., such as we have noticed in previous articles (see *Medical Times and Gazette* for July 11 and August 15). Medical superstitions, it is true, persuade people to believe and practise many follies, but do not, as a rule, affect the well-being of daily life. None the less, however, are they worth the attention of Medical men, especially of those whose lot is cast among intelligent inquiring minds. When appealed to on these subjects, it is not enough for us to pooh-pooh them as absurdities; we should have the real facts at our fingers' ends, and prove ourselves worthy members of a Profession whose reputation for learning stands scarcely less high than its reputation for skill.

One of the commonest superstitions of the present day is the belief that impressions made on the mother's mind are able to influence the original formation or subsequent development of the child in her womb. This belief generally rests on real or fancied coincidences, such as the following:—A pregnant mother has an ungratified longing for a certain fruit, and the infant is born with a mark of that fruit on some part of its body; or she has been shocked at an unsightly hare-lip in a neighbour's child, and her own happens to be born with a similar deformity. Medical literature is rich in anecdotes illustrative of this supposed sympathy between the intra-uterine fœtus and the extra-uterine world. We cannot forbear quoting a couple of them from that old store of learning and amusement, Millingen's "Curiosities of Medical Experience;" they have quite an Herodotean flavour. Through the medium of the mother's imagination the yet unborn infant is made to receive, in the one case, a sort of photographic impress; in the other, a plastic mould of an external object. "A lady during her pregnancy was struck with the unpleasant view of leeches applied to a relative's foot. Her child was born with the mark of the leech *coiled up in the act of suction on the identical spot.*" Again, "A woman gave birth to a child with a large cluster of globular tumours growing from the tongue and preventing the closure of the mouth, in colour, shape, and size exactly resembling our common grapes, and a red excrescence from the chest as exactly resembling in figure and appearance a turkey's wattles. On being questioned, before the child was shown her, she answered that while pregnant *she had seen some grapes, longed intensely for them, and constantly thought of them; and that she was also once attacked and alarmed by a turkey-cock.*" In such cases the balance between the impressions on the mother's mind and the marks on the infant's body is so exact, and the coincidence so pat, that like most other tales of the kind they are rather too good to be true. Curious coincidences between the two may and occasionally do occur. There is no denying this; but even the strongest and best authenticated of them amount only to the feeblest sort of evidence for what they are popularly supposed to prove. They are nothing more than *post ergo propter* assumption. On the other hand, the evidence *against* any such supposed influence(a) based upon the researches of Vrolik and other teratologists, is overwhelming. Out of the many objections which have been urged it will suffice if we merely notice the following:—1. That those supposed mental impressions which have been considered as the cause of malformations have, with few exceptions, taken place in the latter months of pregnancy; *i.e.*, at a time when fœtal development was too far advanced for the impressions to have been operative in the manner alleged. 2. That in the case of twins, exposed to the same maternal influences, the one child may be born malformed, the other perfect. 3. That malformations occur among animals whose low mental development and peculiar mode of generation render the notion of "maternal impressions" inconceivable—fowls for instance—a fact first noticed, we believe, by Dr. Druitt at the Obstetrical Society. In short, no unprejudiced mind which will examine the evidence on both sides of the question can avoid this conclusion—that the facts, popularly assumed to stand in the relation of cause and effect, have really no closer relation than that of accidental sequence.

(a) See "Cyclopædia of Anatomy and Physiology," Articles "Generation" and "Teratology."

A superstition by no means extinct is the belief in the talismanic virtues of a human caul. The amnion, should it happen to remain intact at the child's birth, is still often preserved by mothers and nurses among the lower classes. Not only is it regarded as an omen of good luck to the infant, but also as a treasure to any one who may become possessed of it, preserving him from all sorts of diseases and bodily dangers. Many of our readers probably remember the days when cauls were commonly advertised for sale in the *Times* newspaper.

Though charms, amulets, and talismans now-a-days scarcely form part of the popular Medical creed, the spirit of credulity and superstition which invested them with prophylactic or curative virtues still survives, only less wide in its prevalence and less gross in its manifestations. Many wells and springs in England still possess among the agricultural poor the reputation of effecting miraculous cures, just as the thaumaturgic statues and relics do on the Continent. These Bethesdas are mostly named after some saint, and local tradition often enjoins the observance of certain ceremonies on the part of the sufferers who resort to them for a cure. The bulk of the marvels related of these wells and springs may fairly be set down as imaginary cures of imaginary diseases; but, putting these aside, there will still remain many well authenticated cases of *bonâ fide* sufferers resorting to them, and receiving either great benefit or actual cure. In such cases the mode of action of the remedy may of course be reasonably explained. Confidence of cure imparted just that tone of system and buoyancy of spirits which alone were wanting to restore the patient to health. The reported cures of various ailments, ascribed to the wearing of galvanic rings, and all sorts of silly inert remedies (if true), doubtless admit of the same explanation.

Belief in the influence of certain times and seasons on the human body is by no means uncommon. Take the case of insanity. The lunatic is no longer regarded as the moonstruck madman, the sore-vexed *σεληνιαζόμενος* of the Gospel narrative; but though the notion of his insanity being caused by lunar influence is almost exploded, a suspicion is still widely prevalent that it is in some mysterious way *affected* by the moon's changes. A friend, who for many years has had Medical charge of an asylum, tells us that the same belief is not unfrequently entertained and expressed by lunatics themselves in their lucid intervals, but careful observation has satisfied him that there is no truth in it. A very similar delusion prevails about dog-madness. *Rabies canina* is popularly supposed to occur only in the so-called Dog-days, *i.e.*, during the period of greatest heat in this country. Mr. Youatt's well-known researches have proved that this is far from being the case. Though the disease undoubtedly may arise spontaneously, in the vast majority of cases it is due to the introduction of a specific poison into the system; consequently, it may and does occur almost as often in spring, autumn, and winter, as in summer. Tides, again, are often supposed to exert some influence over the human body. With our sailors and maritime population it is a very common belief that death always takes place at the ebb of the tide. This notion is at least as old as Shakespear's time. Gossip Quickly, it will be remembered, in her memorable account of poor old Falstaff's death, speaks of him as "parting e'en at turning of the tide." We have long suspected that among the lower orders much of the superstition about lunar and planetary influence, if not produced, is at least kept alive by "Old Moore's Almanack," with its annual hieroglyph, coarsely illustrative of the supposed influence of the heavenly bodies on man and beast. This Almanack has an enormous circulation with these people. Many a time have we found it the sole bit of secular literature on the cottage shelf. The labourer and mechanic, who perhaps don't know one letter from another, seem never tired of poring over this vile woodcut with feelings of awe and wonder. The Almanack usually lies alongside of the Bible, with its pages a deal more thumbed than those of the sacred volume.

One more instance yet occurs to us of this belief in the influence of times and seasons. Medical men of the last generation tell strange tales of the scores of people who used to come to their surgeries to be bled (or blooded, as the expression was), especially at the spring and "fall" of the year. "I remember," says Dr. Stokes (b), "when I was a student of the old Meath Hospital, there was hardly a morning that some twenty or thirty unfortunate creatures were not phlebotomised largely. The floor was running with blood; it was difficult to cross the prescribing hall for fear of slipping. Patients were seen wallowing in their own blood, like leeches after a salt emetic." The periodical phlebotomy, though obsolete in practice, yet survives in theory. Young England, if we mistake not, is still wont to be subjected to a "cooling" course of brimstone and treacle about the spring and "fall," under the impression that these seasons are somehow productive of undue richness and heat of blood, and hurtful exuberance of animal life.

Among the half-extinct superstitions of the present day, we must not omit to notice the popular belief in spontaneous combustion. When we now-a-days read Liebig's "Familiar Letters on Chemistry," it seems strange to find him devoting some thirty pages to an examination of the evidence on which alleged cases of this phenomenon had hitherto been received, and demonstrating on scientific grounds the impossibility of its occurrence. But we must remember that at the time when these "Letters" were first published (twenty years ago) a belief in spontaneous combustion was widely prevalent in the public mind; nay, suspicions of its bare possibility were not scouted by members of a profession so scientifically enlightened as our own. Some ten years ago the appearance of a celebrated novel brought the question of spontaneous combustion prominently before the public. Readers of "Bleak House" will not have forgotten that vividly-depicted scene in the little court hard by Chancery-lane, where Guppy and Weevle meet to keep their appointment with old Krook; the sultry heat of that summer's night; the mysterious vapour which from time to time invades the room from beneath, depositing a greasy soot on everything around them; the old man's non-arrival at his tryst; their groping in search of him; and finally their discovery of his charred remains, "the Lord Chancellor of the Rag and Bottle" having taken fire and burnt away in the spirituous fumes of his own grog-soddened carcase. It is just the kind of scene which the soul of the great novelist delighted to conceive and his pen to sketch—a scene to make a timid man's flesh creep and to fill his mind with an undefined superstitious dread. People's curiosity was forthwith re-awakened. They began to inquire whether such a thing ever did, ever could take place. Newspaper letters appeared on the subject, arguing its pros and cons as gravely as a little while ago they agitated the question whether a live frog ever had existed, or could exist, inside a solid block of stone.

Here we take leave for the present of Popular Medical Errors. There yet remain many which we have not noticed; for instance, Homœopathy, Teetotalism, Vegetarianism, Phrenology, *et hoc genus omne*. These, however, open up very wide questions, and need for their due consideration more space than we can here afford. In fact, each one by itself forms abundant material for a somewhat lengthy essay. They have, moreover, been ably refuted from time to time in our own columns, as well as in the leading Medical writings of the day.

(b) "Clinical Lectures on Fever." *Medical Times and Gazette*, 1854.

THE WEEK.

THE TITLE OF DOCTOR.

It was fully anticipated that the much-disputed question as to the right of other bodies than universities to confer the title of Doctor would this week have received considerable elucidation in the Irish Court of Chancery. A delay has, however, most unexpectedly arisen, on the second day on which the subject was before the Court, in consequence of the determination of the Lord Chancellor of Ireland not to hear the case, on the plea that, as Vice-Chancellor of the Queen's University, he is personally interested in the cause. He has therefore, as will be seen from our legal column—where a report of the proceedings, copied from *Saunders's News-Letter*, will be found—sent the case to the Rolls Court. But not content with declining the decision of this question for himself, Mr. Brady creates a prospective difficulty in case of an appeal from the Rolls Court, which would come before the Chancery Appeal Court, consisting of himself and the Right Honourable Francis Blackburne, Lord Justice of Appeal, the esteemed Vice-Chancellor of the University of Dublin. Should there be an appeal, the Chancellor suggests that it might be heard by some of the common law Judges. A remarkable circumstance connected with this determination of the Chancellor is, that it was not taken until the second day, and that on Friday he had allowed the case to be partly opened before him. The question will, however, lose nothing by being tried before the able lawyer who at present fills the office of Master of the Rolls in Ireland, and we shall take care to secure for our readers a full report of the arguments brought forward on each side, and the earliest intelligence of the decision. The case will probably come on next week.

W. R. WILDE ON THE VITAL STATISTICS OF IRELAND.

"Vital Statistics" is the title of a volume recently presented to Parliament by command, forming part of the returns collected at the census of Ireland in the year 1861. It consists of 167 folio pages, and is divided into nine sections. In these are successively tabulated a number of very valuable facts respecting the deaf and dumb, the blind, the lunatic and idiotic, the lame and decrepit, the inmates of workhouses, the sick in hospitals, the distressed sick in asylums, the inmates of prisons, and the total sick in Ireland. In an Appendix the last subject is carried on with greater detail, and a clear index facilitates reference.

Until the inquiry instituted under the Census Commission for 1851, no trustworthy general returns had been made as to the number and condition of the deaf and dumb in the British Isles. In 1861, following up the system instituted in 1851, the query on Form A, the "family schedule," was repeated. To this, 12,195 answers were received. After these had been entered in special registers, a new set of queries were issued to the constabulary and police enumerators for each person so returned. The result of this more accurate process was greatly to reduce the numbers of really deaf and dumb, which were ultimately computed at 5653. Congenital deaf mutes were 4010 in number, being 476 more than at the previous census, though the population has decreased by 753,418 persons. The absolute increase in numbers is attributed partially to greater accuracy in the returns, while the great proportional increase from 1 in 1573 to 1 in 1370 persons "may be accounted for by the immense extent to which emigration has increased between 1851 and 1861, the emigrants being generally the most healthy persons in the community, while the deaf and dumb were left behind, either with relatives or in public institutions." 723 persons, 442 males and 281 females, were returned as dumb, but not deaf; 265 of these had no other defect, 96 were also paralytic, 270 were idiotic, and 92 were both dumb, paralytic, and idiotic. An interesting group of tables gives the occupations of deaf mutes, and those of their parents. The latter are distributed among 114 handicrafts. Of these by far the largest number—1793—were employed in farm service; 193 were employed on clothing, as weavers, shoemakers, etc., and the remainder in various occupations, or were members of the higher classes. The mutes themselves show totals of 865 agricultural labourers, and 122 farmers or herds, 92 were bootmakers, 187 were seamstresses, 368 domestic servants, 458 at school, 2376 were unspecified, and the remainder divided over numerous avocations, such as weaving, washing, smiths', and carpenters' work. 13 were sailors, 10 printers, 52 mendicants and strollers, 2 schoolmistresses, 1 an editor, and 1 a "tobacco spinner," an occupation which, though classified as "ministering to food," was previously unknown to us.

The number of congenital mutes in each family forms the subject of another table, the results of which deserve quotation:—

> "In 357 instances there had been born two mutes in each family; in 107 of these the mute children were both boys; in 75, both girls; and in 175 a boy and a girl. 159 instances occurred of three mutes born of the same parents; in 28 cases all three were males; in 23, all females; in 48, 2 males and a female, in 60, 1 male and 2 females. In 36 instances 4 mute children occurred in a family; 13 families had each 5 mutes; 6 mutes in a family occurred 5 times. In 1 case there were no less than 7 mutes born of the same parents, the sexes being 2 males and 5 females. There was neither hereditary predisposition, nor any other probable physiological or pathological reason assigned to account for this very remarkable peculiarity."

Among the probable causes of congenital mutism are cited consanguinity of parents, family peculiarity, and hereditary taint. A table shows, respecting the last of these—

> "That in 211 instances, including 320 persons, born in families some of the previous members or the collateral branches of which were mute, as many as 187 persons were born deaf and dumb among those where the disease came through the male parent; and 133 where this congenital defect was transmitted through the female line. It tends to show that, contrary to the generally received opinion, the amount of morbid action was transmitted with greater intensity through the father than through the mother."

It appeared that 76 males and 59 females were, or had been, married. From the marriage of 91, 213 children resulted, among whom there were only 3 instances of mutism. Three instances were recorded of the intermarriage of persons both of whom were deaf and dumb; their offspring amounted to 12, none of whom were either deaf or mute. Space prevents our going into the interesting details given as to acquired mutism, the diseases and accidents causing mutism, the education of the deaf and dumb, and the institutions for their relief. On all these subjects much information is given from foreign as well as domestic sources. We hope to be enabled to recur to the other topics contained in this valuable document before long.

THE COTTON FAMINE.

A paper, read before the Manchester Statistical Society by Dr. Noble a few weeks back, affords a specimen of sound statistical analysis, and is interesting as venturing on some cautious conclusions regarding the great cotton calamity in its Medical aspect. He examines the fluctuations in the death-rate, with a glance at their causes, having especial reference to the supposed influence of the cotton famine on recent mortality. And in the outset he admits that his remarks

> "Have been suggested by the fact, that of late the disposition has been very generally manifested to attribute every accidental elevation or depression in the death-rate occurring in any part of these districts of the cotton manufacture to the distress which diminished supplies of the raw material have caused to fall upon many of our working population. This disposition has found expression in various Societies, and in the public press, and the most diverse theories have been invented to explain supposed relations between an ascertained elevation or depression of the mortality in particular localities

and the reduced employment therein prevalent. It is sometimes said, mothers not being so extensively employed in the mills, have attended better to their children, and in this way many lives have most probably been saved." And again—"The working-classes have drunk less, and so have had amongst them less disease and death. The idea has been thrown out that the death-rate in the factory districts had possibly been lowered by a diminution of the cotton flue in the air, a circumstance which might have lessened the amount of bronchitis. And yet," says Dr. Noble, "I have a certain well-grounded conviction that, within the last two years, there has been nothing in the mortality of the cotton districts in any respect unusual." On the contrary, he finds that "ordinary causes sufficiently explain the several variations that have been observable within the last two or three years. And if the fact be so, it is, of course, quite gratuitous to seek for the explanation in some unwonted cause."

Dr. Noble examines the effect on the death-rate of temperature, epidemics, and the transference of disease by movements of the population, such as the Irish immigration into the larger English towns during the potato famine, from which review he is led to the conclusion which follows. Heat causes death from diarrhœa at one season, cold from bronchitis at another; and the introduction of any zymotic disease will send up the death-rate at any time. Hence, "as I observed at the onset, whilst a certain uniformity in the rate of birth is observable, fluctuation in the death-rate is to be expected rather than otherwise." Therefore, "when a high or a low mortality has obtained in any given district, at any given time," we ought first to see whether it can be explained by "the facts of familiar experience, before some extraordinary agency is anticipated to have been in operation." "Leges philosophandi vetant plures causas fingere vel quærere quam quæ ad rem explicandam sufficiant."

He nexts tests the mortality of the last five years by the generalisations thus obtained, choosing the Ancoats district, in which most mills and operatives are situated. During 1862, the first year of distress, the deaths were below the average of the preceding years. For the first three quarters of the present year the mortality has been high; but Dr. Noble remarks that the same state of things has existed all over the country, and especially in London. The fever, which at one time threatened to become epidemic in Manchester and Preston, did not spread, and his inquiries of Surgeons and clergymen failed to establish "the prevalence of either purpura or any other bodily derangement fairly ascribable to physical destitution."

In conclusion the writer says:—

"What has been the actual working of this so-called cotton famine upon the several classes of society? Among the wealthier portion of the community it has given rise to much anxiety and thoughtful attention; to many of the middle ranks it has brought a dissipation of savings and a diminution of business, and been a cause of painful consideration and gloomy foreboding; to the working population it has been the occasion of enforced idleness to large numbers, and to consequently diminished resources, but not the occasion—as has been apparent from the beginning—of any actual physical destitution,—at least upon a large scale. In reference to this latter point, it has been conceded on all hands that the food requirements and other more prominent exigencies have been admirably met by the various bodies already existing, or specially organised, for the relief of the poor.

"Where, then, has existed the probable cause for an anticipated increase in the death-rate, referable to the cotton famine? Without doubt, anxiety in the higher divisions of the community, and a reduction of luxuries and comforts in the lower, are competent to reduce the tone of the system in individuals, but not to produce acute disease and speedy death. If, indeed, the mortality of these districts should hereafter be elevated as a consequence of recent events, it should be anticipated not as an immediate, but as a remote result."

We contrast with these judicious conclusions others independent of them and not less trustworthy. It is satisfactory to remark that the slight *primâ facie* discrepancy between two observers is practically cleared up by the different periods to which their researches apply. For whereas Dr. Noble founds his data on 1862, and the first three quarters of the present year, Dr. John Morgan, from whose Report as Secretary of the Manchester and Salford Sanitary Association we proceed to quote, deals only with the third quarter of the current year. He appears to indicate the beginning of increased death-rate as a secondary occurrence, which Dr. Noble had all but predicted. After giving details of decided and important excess in this particular during the three months just concluded, he adds:—

"It seems difficult, then, to resist the conclusion that the hard times through which the people have passed and are still passing are beginning to tell; that a population long accustomed to live well on high but hard earned wages will not flourish beyond a certain time, at any rate in full physical vigour, under the various depressing influences which have combined to assail them. And what are these influences?—poor fare, mental depression, crowded dwellings, and a sickly season. That the food upon which the poorer portion of the factory operatives have been forced to subsist was not such as they were brought up on and accustomed to none will deny. It seems reasonable, likewise, to suppose that inability to obtain full employment among a population little disposed to shirk the calls of labour, by depressing the spirits, has a tendency also to lower the health. As a natural consequence of low wages, houses and lodgings have been more densely occupied, and the never excessive supply of fresh air in the dwellings of the poor has been still more vitiated."

FROM ABROAD—EFFECTS OF ALTITUDE ON THE RESPIRATION IN MEXICO—ILL EFFECTS OF THE CONFINEMENT OF YOUNG CHILDREN FOR EDUCATION—EXPULSION OF A MEMBER OF THE ACADEMY OF MEDICINE—M. DEPAUL ON VACCINE VIRUS.

In a recent work upon Mexico, M. Jourdanet, who had resided there several years, made some statements which so differ from generally received opinions that M. Levy, Director-General of the French Army, requested several of the more distinguished Surgeons of the Expeditionary Corps to investigate the subject whenever opportunity occurred. According to M. Jourdanet, foreigners undergo acclimatisation readily enough at the sea level, and may attain an advanced age, while those who inhabit the higher regions rarely attain the term of natural existence. The inhabitants of these regions also neither live so well or so long as those of the lower regions. The imperfection of the respiratory endosmosis induces a kind of anæmia, which frequent alike at Puebla as at Mexico, resists the action of iron. The insufficiency of oxygen is not only due to the diminution in the density and weight of the air, but also to the slowness of the respiratory movements. "Those who inhabit these higher regions breathe less rapidly, the rarity of the air producing an apathy of the muscular system, which influences the chest. The number of its expansions is diminished, and not unfrequently, forgetting to respire, one is obliged to compensate by making deep inspirations." These assertions are very contradictory to the prevalent opinion that under the permanent influence of a diminution of atmospheric pressure the respiratory movements become accelerated to compensate by their number for the small proportion of oxygen derived from each. It became therefore desirable to count and compare with exactitude the respiratory movements observed amongst Europeans and natives on the high plains of Mexico, and to dose the carbonic acid expired as a measure of the energy of the hæmatosis. M. Léon Coindet has already forwarded the results of 1500 observations which he has made upon the French and Mexicans in illustration of the first portion of the problem. These have been made 500 at a time, at three different periods, and all agree in the general result, that men placed on the high plains of Mexico do not respire less rapidly than those who live 2277 metres lower down, the general mean being 19·36 per minute for the French, and 20·297 for the Mexicans. Intelligent Practitioners in Mexico are quite surprised that a contrary opinion should have been entertained. He awaits further opportunity to investigate the amount of chemical action which takes place; but in the mean time he asserts that there is nothing indicating that the respiratory function is less active than at the sea level. The equilibrium always becomes established, whatever may be the rarefaction and lightness of the atmosphere. It is true that with those in whom the respiratory apparatus has not undergone acclimatisation long and forced marches are difficult and painful; but it is a mere supposition to state that this is due to the insufficiency of the oxygenation of the blood at these altitudes, the result of a diminution of respiration. The so-called Mexican anæmia is probably nothing else than the yellow colour proper to the indigenous inhabitants. Examining the pulse in 500 subjects, M. Coindet found the mean to be 76·246 among the French and 80·24 among the Mexicans—the relations between the circulation and respiration thus observing their normal proportion. The capacity of the chest was found to be somewhat larger among the French than the Mexicans, while their respective heights differed but little, proving the groundlessness of the statements which have been made that the large capacity of the chest of the Mexican in proportion to his stature explains his ability to undertake prolonged journeys at a rapid pace. It is not a vast chest which puts him at his ease in these rarefied altitudes, but his more rapid and energetic breathing compensates for the rarety and lightness of the atmosphere amidst which he resides and attains an advanced age. M. Coindet, writing in October, states that nothing can be better than the health of the army at that period. The soldiers are continually on the move without exhibiting any signs of depression and fatigue, and anæmia has yet to be sought for among them.

A melancholy case which has recently occurred in one of the public schools of New York induces the Editor of the *American Medical Times* to call the attention of his readers to the subject of the evils of the confinement of young children for the purposes of education. A little girl, aged four, kept in for not knowing her lessons, became much agitated, and after a while, falling into a state of syncope, expired. This, of course, is an extreme case, but it is only by means of extreme cases that attention can be called to crying evils, and their mitigation accomplished; and although an occurrence like the above is more likely to occur in a well-educated community such as the American than in our own, yet over-confinement of the young is of far too common occurrence with ourselves, and is attended with very bad consequences.

> "It is surprising," says the writer, "at what a tender age children are placed in school and brought under the restraints of a worse than prison discipline. At that period of childhood, or rather of infancy, when during its waking hours every muscle naturally requires active and free play for its proper development, the child is compelled to sit for hours as unmoved as a statue. But with this cruel restraint we have the additional evil that the child is confined to a room the atmosphere of which is infected with poisonous gases and foul exhalations from human bodies. The conditions necessary to retard the growth and development of the child are complete, and the result is always accomplished. We see many of the effects of such training in the feeble bodies, dwindled limbs, curved spines, and nameless other deformities of the adolescents. But how many unseen and unappreciated vices of development and growth are created by these causes! How destructive to the delicate organisation of the nervous system is such training, and how sadly are its functions perverted? . . . The vital question recurs,—at what age should a child be sent to school? There can be no doubt that previously to the age of six or seven the child should neither be subjected to systematic physical restraint, nor should its mind be tasked with appointed lessons. The full and perfect development of the body is a more important end to be attained in the training of a child than the cultivation of its mind. That system is perfect only which secures these two objects."

An unprecedented occurrence took place the other day at the Academy of Medicine, viz., the expulsion of one of its members. It seems that a M. Priou, for a long time a Practitioner at Nantes, but of late of Rouen, has been in the habit of issuing advertisements and placards highly derogatory to his professional respectability. At the late Medical Congress of Rouen he forced himself amidst his more honourable brethren, and even attempted to take part in its proceedings, until compelled by the President to withdraw. The Medical Association of the Seine-Inférieure having formally brought his misdeeds under the notice of the Academy, his name was ordered to be erased from the list of the members of that body, and the fact to be made public in their bulletin.

M. Depaul terminated his statement at the Academy of Medicine, with regard to the origin of the vaccine virus, with the following conclusions, embodying the results of the investigations he has been for several years engaged in upon the subject:—

> "1. The vaccine virus has no existence. 2. The so-called vaccine virus, regarded as the antagonist of, and neutraliser of the variolic virus, is nothing else than the variolous virus itself. 3. The horse and ox tribes are subject to an eruptive malady which is identical, as far as its *nature* is concerned, with human variola. 4. It is nearly demonstrated that this is the case also with respect to various other animals, as pigs, sheep, goats, dogs, apes, etc.; but with respect to these I have not had sufficient personal experience to justify me in speaking too positively. 5. The local and general phenomena are the same in man and animals, the differences observed with respect to the pustules being dependent on the structure of the skin and the presence of numerous hairs. 6. It may appear either in the sporadic or epidemic form in the horse and ox tribes. 7. The horse and cow may be easily and reciprocally inoculated. 8. From the cow individuals of the human species may be readily inoculated, provided that they have not already had spontaneous or inoculated variola. 9. Doubtless man may also be inoculated from the horse; but prudence has hitherto prevented the experiment being tried, the horse being subject to several dangerous diseases which might be inoculated at the same time. 10. Human variola will inoculate the cow, the horse, and various other species. 11. When an epidemic of human variola breaks out it may become extended by contagion to animals, as cows, oxen, horses, sheep, etc. 12. An epidemic of variola may also commence with animals and extend to man. 13. Inoculated variola gives rise to far less general reaction than that due to simple contagion, and this is especially true with regard to animals. 14. The pustules resulting from inoculated variola are often limited to the inoculated points. 15. When a secondary eruption does take place it is almost always insignificant, the number of pustules being easily counted. 16. In a general way, the variola of animals may be said to be more discrete and less dangerous than human variola. 17. The danger of inoculation has been much exaggerated. 18. It is probable that animals, like man, are subject to aphthous affections. 19. But the *aphthous disease*, as it is described by several modern veterinarians, is in fact variola."

A discussion will naturally follow propositions like these, and to that we shall afterwards recur.

OPENING OF THE NEW CLINICAL HOSPITAL AT NAPLES.—The King of Italy, during his triumphant progress through his new dominions, has offered every possible encouragement to arts, science, and works of charity. Last week he opened a magnificent new clinical Hospital at Naples, occupying the place of an old convent. All the clinical institutions of the city are to be united here, together with a new one for diseases of the skin, and the school of practical pathological anatomy. Until the present time this large city of 500,000 inhabitants had only 300 beds for the reception of acute disease; while the ancient University of Naples possessed neither space or means for clinical teaching, hardly being able to accommodate its thousand students. It is indeed refreshing to meet on every side of this regenerated Kingdom of Italy signs of scientific progress, and an evident desire once more to take part in that noble race in which formerly Italians held so high a place.

REVIEWS.

◆

A Manual of Ophthalmoscopic Surgery, being a Practical Treatise on the Use of the Ophthalmoscope. By JABEZ HOGG, Esq., Assistant-Surgeon to the Westminster Royal Ophthalmic Hospital, etc., etc. Third edition. John Churchill and Sons, New Burlington-street.

OUR author tells us that his book is re-written and enlarged, and that he has not denied himself space may be inferred from his letter-press reaching to 296 pages. A great deal of the bulk of the volume is made up by the lengthy narration of cases. We believe that this method of writing, which is on the increase, lessens the number of readers, especially of books devoted to special subjects. We must regret the absence of a table of contents, and express a hope that, should another edition be called for, this deficiency will be supplied. By the reviewer the want is felt, as well as by the student seeking information.

The work is professedly devoted to subjects that are new and only now understood by the modern ophthalmic school, and the important points that have been attained by the use of the ophthalmoscope are thus enumerated :—

"Firstly, we have not now the least difficulty in determining the existence or non-existence of cataract, formerly surrounded by so much doubt that sometimes no amount of Professional skill or experience could satisfactorily solve. Secondly, the approach of cataract may be observed in its earliest stage, and long before it is discoverable by the unassisted eye. Thirdly, it demonstrates the physical cause of muscæ, and, conversely, when it is a symptom of disorder. Fourthly, it has removed almost from ophthalmic nomenclature the indefinite term of 'amaurosis,' where, as Walther observed, the 'patient and the Physician were both blind,' by revealing the dependence of many such cases on causes widely different, but easily enough perceived with the ophthalmoscope. Fifthly, by disclosing retinal apoplexy, it prevents, in some cases, an injurious resort to mercurials ; and, on the other hand, by showing the presence of effusion of lymph on the deeper structures of the eye, it enables us to judge when such a treatment will prove advantageous and proper ; and sixthly, its value is considerable, even in those cases of what may be called negative advantage, where, by showing the retina, already detached and disorganised, the Surgeon might otherwise, without such knowledge, have been tempted to perform an utterly useless operation."

After what has been said of former editions, it is enough to add that the present one is a decided improvement on the preceding, and that an inquirer need not go further for rules to teach him how to use the ophthalmoscope.

A great deal of interesting matter is to be found, which, although strictly of an ophthalmic character, is not exactly connected with the ophthalmoscope, such as "the Nature of Light," "the Structural Accessories of Vision," which occupy a considerable number of pages. But this does not spoil the book, it only swells its size.

We must not omit to say that the four chromo-lithographic plates are well done.

On the Immediate Treatment of Stricture of the Urethra by the Employment of the Stricture Dilator. By BARNARD HOLT, F.R.C.S. Second Edition. London: John Churchill and Sons. 1863.

THE early appearance of a second edition, and the growing adoption of Mr. Holt's method, speak for themselves. He has treated 250 cases of stricture with "uniform results, and danger *nil.*" Infiltration of urine is prevented by the hardened tissue that surrounds the stricture and acts as a protective capsule. The rod of the instrument is now made to act as a catheter, so as to reveal when the bladder is reached, and there is a modification of the handle which renders it utterly impossible for the dilating rod to escape from between the blades of the instrument. Mr. Holt concludes with a generous acknowledgment of the ingenuity with which Mr. Smyly and Mr. Macnamara have used the stricture dilator and suggested a modification of it analogous to one of those which he has himself adopted.

PROGRESS OF MEDICAL SCIENCE.

◆

Selections from Foreign Journals.

ON THE DESTRUCTION OF ALCOHOL WITHIN THE ECONOMY.

By. M. BAUDOT.

WE wish to draw attention to some papers recently published by M. Baudot, which describe the results of a series of carefully instituted experiments. The physiological world was startled a little while since by an apparent demonstration on the part of MM. Lallemand, Perrin, and Duroy of the elimination of alcohol by the kidney, and its uselessness as an article of diet. The general experience of mankind received somewhat of a shock, and great was the jubilation of teetotallers, who, having long racked invention to discover charges against poor John Barleycorn, now unexpectedly found marshalled on their side grave Doctors, prize-winners at the Academy, test-tube in hand, bearing aloft the last new discovery. Alas for the stability of scientific conclusions and the practical consequences often somewhat too hastily deduced from them. M. Baudot now tells us that this is all a mistake, and one which we should feel somewhat ashamed at having made, seeing that an examination of Lallemand's experiments ought to have shown us that they will not bear the interpretation upon them. Unfortunately, the work did not come under M. Baudot's notice until recently, or we should have had his intelligent criticism applied to it before this. Analysing the account of the experiments, he finds that by means of their ingenious apparatus, M. Lallemand and his *confrères* are only enabled to prove the elimination by the skin, lungs, and kidneys of 60 out of 225 cubic centimetres of alcohol, leaving 165 undetected, these 165 being in fact destroyed within the economy. M. Baudot maintains that alcohol is in fact perfectly destroyed in the economy, only as it is an eminently volatile and soluble substance, a small proportion may escape this intra-vascular combustion, and pass away by the skin, lungs, and urine. To the objections that alcohol is found in the blood and all the tissues, and therefore is not destroyed, it is replied that this is so only because the research for it is made only a short period after its ingestion, a certain interval, sometimes as long as fourteen hours, always passing prior to its total disappearance.

In M. Baudot's opinion, a fair examination of the work in question ought to suffice for the refutation of the conclusions advanced by its authors; but in order to pursue the matter with still more exactitude, he has himself instituted a series of experiments upon his own urine and that of several other persons. The results were purely negative. It is true that traces of alcohol were sometimes detected, but this is not the point, the matter in dispute being whether the quantity of alcohol excreted with the urine, added to that rejected by transpiration and expiration, represents the totality of alcohol absorbed. In twenty-two experiments the delicate test employed by M. Lallemand detected alcohol only in two instances, 75 centimetres in the one and 10 grammes in the other, the first of these corresponding to about 4 litres of wine drank and the second to 305 cubic centimetres of alcohol swallowed. In the twenty other experiments traces were not discernible. In the urine of a man who drank a large quantity of alcohol habitually, M. Baudot found alcohol in appreciable quantity. It results, then, from his experiments that the old doctrine held by the world at large as well as by so many eminent physiologists is the true one. It is true that alcohol may in small quantities pass away by the urine, although this can be no general circumstance, as the most delicate tests have so often failed to exhibit it. Are we to look upon such excretion as a temporary or accidental fact, though still a physiological one? or is it of a pathological character, comparable to some extent to glucosuric? Awaiting further researches upon the subject, the author is much disposed to regard it as a kind of *alcoholuric.* Other important questions call also for attention. Thus, do the various forms of alcohol once swallowed comport themselves in the same manner (not as regards their physiological effects, which, in spite of what is said by some chemists, are entirely different) with respect to their resistance to intra-vascular oxidation? and does alcohol, whether concentrated or diluted, give rise to the same effects, in this point of view, as that which exists naturally in wine?

Finally, what are the intermediary stages through which alcohol passes when subjected to the action of oxygen within the economy prior to reaching the ultimate compounds which are eliminated? The following are the conclusions M. Baudot deduces from the examination of the portion of the subject which he has undertaken:—1. Alcohol swallowed in moderate quantity under the form of wine, kirsch, rum, or brandy, is not eliminated by the urine. 2. We may in certain cases discover scarcely appreciable traces of it in this fluid. 3. In other exceptional cases an appreciable quantity is found, but always very small in proportion to the amount swallowed. 4. Alcolometry properly employed is suitable for the detection of very small quantities of alcohol. 5. The solution of bichromate of potass in sulphuric acid is even a far more sensitive reagent than is required in these researches. 6. We may conclude that alcohol is destroyed in the economy, and that it fulfils the part of an element of respiration assigned to it by Liebig.—*Union Méd.*, Nos. 135, 140, 141, 142.

FOREIGN CORRESPONDENCE.

ITALY.

NAPLES.

HAVING lately travelled throughout the *quondam* kingdom of Naples with the special purpose of examining the mineral waters of that country, I think that a short *résumé* of what I have found may be acceptable to the readers of your Journal. There are upwards of a hundred mineral springs there, which, by the gases and solids they contain, may be supposed to be endowed with physiological and therapeutical properties different from those of ordinary water. Most of these springs, however, have not yet been carefully analysed, nor are they furnished with suitable establishments, so that they can for the present only be used by the neighbouring population.

The whole southern part of the peninsula abounds in sulphureous springs, most of which have a rather low temperature. There are also numerous chalybeates and waters containing a considerable amount of carbonic acid, while on the eastern declivities of the Apennines a number of waters issue, which, from the large proportion of salines they contain, possess a purgative action. A railroad is now projected, which, proceeding from Naples, is to traverse the whole country from west to east, and then to run along the entire coast of the Adriatic; and as soon as this highway will be finished, the waters I have just mentioned will become easily accessible to patients. At present I shall only give some details of those springs which are now medically used.

The most important among these are the springs of the city of Naples and its immediate vicinity, viz., the sulphureous water of Santa Lucia, the chalybeate of Chiatamone, the sulphureous, saline, and chalybeate springs of Castellamare, the waters and vapours of Ischia, and the waters of Bagnuoli, between Naples and Pozzuoli. A cold sulphureous water is a great comfort to Neapolitans, and the spring of this kind which issues from tufa below the hill of Pizzi-Falcone, on the shore of Santa Lucia, at the level of the sea, is extensively used by them. Its temperature I have found, in September last, to be 55° F. An analysis which was made some time ago, but which is not quite reliable, gives the following contents in six pounds of the water:—

Carbonic acid	32·81 cubic inches
Sulphuretted hydrogen . .	5·95 „
Sulphate of soda . . .	0·08 grains.
Chloride of sodium . . .	0·31 „
Carbonate of soda . . .	0·27 „
Carbonate of lime . . .	0·38 „
Silica.	0·02 „

As all diseases of the skin, whatever may be their nature, are at Naples treated with sulphur, and as they are all believed to be due to bad juices in the system, the use of the sulphureous water is a great comfort for patients suffering from those diseases, and not less so for healthy people who think they have bad juices, and consequently a disposition to diseases of the skin. The water is also taken in chronic catarrh, in diseases of the lymphatic glands, scrofula, etc.

The acidulous chalybeate of Chiatamone issues at a trifling distance from the spring just mentioned, likewise at the level of the sea. The evolution of carbonic acid is sufficiently powerful for rendering the air in the grotto, which has been built over the spring, at times irrespirable. This water had, in September last, a temperature of 67·3° F., and is by the people said to be warmer in winter, which is scarcely true. It contains in six pounds,—

Carbonic acid	41·74 cubic inches.
Chloride of sodium . . .	0·47 grains.
Bicarbonate of soda. . .	0·43 „
„ lime . . .	0·33 „
„ magnesia . .	0·07 „
„ iron . . .	0·27 „
Silica	0·63 „

Considering that a water, if it is to be pronounced a chalybeate, should contain at least one-tenth of a grain of carbonate of iron in sixteen ounces, I should say that this spring is a weak chalybeate, but a good acidulous water, and therefore of importance for the inhabitants of a populous town. The water does not come up in sufficient quantity to be used for bathing, and it is therefore only drunk. Its taste is very pleasant. Patients who live in Naples during winter may, if they suffer from anæmia and certain nervous affections, take it with advantage.

In Castellamare, which can now be reached by rail from this city in three-quarters of an hour, and where, on account of its mild and yet bracing air in summer, so many foreigners take up their abode for that season, we have, within a few square feet, several springs of a different chemical composition, rising from the ground, viz., a sulphureous, saline, and chalybeate; while a muriated and saline water issue at about a hundred yards from these latter. Their composition is as follows:—

	Acqua ferrata del Pozillo.	Acqua media.	Acqua sulphureo-ferrata.	Acqua del Muraglione.
Carbonic acid . .	7·22	0·95	5·93	1·81
Nitrogen . . .	0·05	0·04	0·10	0·04
Oxygen . . .	0·09	0·03	0·08	0·18
Sulphuretted hydrogen	..	..	0·12	..
Bicarbonate of soda .	6·55	2·46	5·34	5·96
„ magnesia	2·75	1·97	2·86	2·25
„ lime .	1·25	1·13	1·50	2·81
„ iron .	0·19	..	0·09	..
Sulphate of soda .	3·23	6·75	3·09	4·50
„ magnesia	4·69	2·31	1·56	1·87
Chloride of sodium .	16·04	18·15	36·70	42·17
„ lime .	5·08	7·56	5·05	5·95
Magnesia . . .	..	..	..	3·06
Silicate of lime . Magnesia and iron .	0·86	1·67	0·99	2·00
That is, in 16 ounces	47·99	42·43	63·64	72·59 grs.

The temperature of the three first-named springs was, in September, 59·3° F., the air being at that time 60·8°. The last-named spring had a higher temperature, viz., 64·5°.

I have here mentioned only one analysis of the acqua del Muraglione, viz., that of the weaker spring. There are, however, two of them close together, the weaker one, at the right side, being called sulphureous; while the stronger one, at the left side, is called magnesia-spring. The latter is a strong purgative water, and has a somewhat lower temperature than the former. The characteristic feature of all these waters is chloride of sodium, with sulphates. The acqua ferrata, by its greater amount of carbonic acid, keeps in solution a larger quantity of iron, so that it may be fairly called a chalybeate. There are very good baths at the latter spring—viz., thirty-two cabinets with tubs of glazed bricks—which were established in 1840, and have since then been kept in good order. All these springs issue at about the level of the sea, at a small distance from the shore, at the end of the place in a direction towards Sorento; they rise, no doubt, from the fissures between the limestone of the Apennine and the superposed volcanic tufa.

Castellamare is almost always full in summer, and offers therefore much the same aspect as the German and French spas at that time. It has the advantage that sea-baths may also be taken there. Patients suffering from diseases of the chest should not live in close proximity to Vesuvius, although at present this volcano is so quiet that it could not do any harm. Castellamare is chiefly suitable for persons of a lymphatic temperament, for sickly children, patients with erethic nervous affections, etc. For torpid constitutions Sorento is better adapted.

The acqua media and del Muraglione may be employed in congestion of the liver and spleen, and their consequences—indigestion, icterus, hæmorrhoids, etc. These waters are rather similar to those of Homburg, Kissingen, and Soden. Last summer Castellamare was less full than usual, as the fear of brigands kept away a good many visitors. I must, however, say that the brigands have never yet inconvenienced foreigners at Castellamare, although a short time ago they made themselves rather unpleasant to the native population of the neighbourhood of Monte S. Angelo.

REPORTS OF SOCIETIES.

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ABERNETHIAN SOCIETY, ST. BARTHOLOMEW'S HOSPITAL.

THURSDAY, OCTOBER 29.

Mr. STONE, Vice-President, in the Chair.

MR. BAKER delivered an address on

THE LENGTH AND CONNECTIONS OF THE MESENTERY IN RELATION TO THE PRODUCTION OF HERNIA.

After remarking that some of the experiments to be related had been brought before the notice of the Society in the session 1861-62, the author said that they had been performed with the intention of proving the truth or falsity of the assertion, often advanced by those who look to disease of the peritoneum for the primary cause of hernia, that "in a healthy person, or rather in one not specially predisposed to this disease, the mesentery is not long enough to permit the escape of the intestines from the abdominal cavity, and that some increase in its length must take place before a rupture can happen." He then made some general remarks on the relations of the abdominal walls to the viscera contained in the cavity of the abdomen, and on the manner in which they were mutually affected in the act of respiration, whether simple or modified, as in straining, etc., and after reviewing the opinions of the various authors who had treated particularly of the causes of hernia, proceeded to relate some experiments which, with Dr. Andrew's permission, he had made in the post-mortem room of the Hospital. In determining the length of the mesentery, relatively to the boundaries of the abdomen, he said that the inguinal and femoral rings, and not the symphysis pubis, should be taken as the points to which the intestine should be drawn down; and for this reason, that the distance between the attachment of the mesentery at the spine and the upper part of the symphysis pubis is greater than between the former point and either the internal inguinal or femoral rings. The result of several measurements which he had made was to show that the femoral ring is ½—¾ inch, and the internal inguinal 1—1¼ inch nearer to the attachment of the mesentery than the symphysis pubis is, so that a coil of intestine which will just touch the upper part of the symphysis, and no more, will be quite long enough to pass through the internal inguinal ring, and, to a less extent, through the femoral. In making post-mortem examinations the author remarked that it will be always found that some parts of the bowel will reach the symphysis pubis; but, in order to make the experiment under conditions as nearly as possible like those which exist during life, an artificial hernia was made in the following manner:—Instead of opening the abdomen directly, the usual longitudinal incision was made through the integuments only, which were then reflected from the surface of the abdominal muscles, as far as Poupart's ligament. Some of the tendinous fibres of the external oblique muscle were then divided, and the internal ring was exposed from the outside, and through this a small opening was made through the peritoneum into the cavity of the abdomen. The ends of a pair of forceps were then introduced through the hole, and a coil of intestine was pulled out. This experiment was performed on several subjects consecutively, and, in every instance, with one exception, which a subsequent examination of the body proved to be accidental, no difficulty whatever was found in producing an artificial hernia without making any traction on the mesentery. In some cases a hernia was made on both sides; and the result, as might have been anticipated from the fact of the lowest part of the bowel being attached to the right sacro-iliac synchondrosis, showed that rather more intestine may be usually drawn out on the right than on the left side. Mr. Callender, in his work on "Femoral Hernia," the author said, had referred to the same fact, of the attachment of the mesentery being more favourable for the occurrence of a right than a left rupture. The author then related several cases which he had tabulated, to show the extent to which the bowel could be drawn over the symphysis pubis. The result showed that in a large majority of cases the width of the intestine, and in some a part of the adjacent mesentery, too, may be placed without traction beyond the upper edge of the symphysis, and, of course, by so much the larger hernia can happen through the internal ring. This applies, of course, to only some of the coils, as, from the varying height at which different portions of the mesentery are attached to the spine, many parts of the intestine will not reach nearly so far down as the symphysis. Some cases were then related in which hernia had existed during life, but in which no unnatural length of the mesentery was discovered after death; and the author then gave, as an example of a different set of cases, an account of the dissection of an old hernia, in which it seemed certain that the alteration in the length and attachments of the mesentery, which were in this instance found, had occurred after, and not before, the formation of the disease, on account of the constant dragging to which it had been subjected. The relations of the mesentery, as they were affected by different postures of the body, were then considered, because it was obvious that the recumbent posture of the subjects of the previous experiments was the least advantageous from which to establish the fact of the mesentery being, under ordinary circumstances, long enough for the production of a rupture, for two reasons:—1. The influence of the mere weight of the intestines in assisting their protrusion is absent. 2. The position of the spine relatively to the pelvis, or, in other words, of the attachment of the mesentery relatively to the point at which the bowel commonly leaves the abdomen, is least advantageous for the production of hernia. 1. To determine, therefore, what is the influence of the weight of the intestines (for in the living body it is difficult to say how much of the increased size of a rupture, when the patient is standing, is due to this and how much to the action of the abdominal muscles), the abdomen was opened, and the extent to which the intestines would reach outside the parietes was measured, first in the recumbent and then in the erect posture. It was found that they fell one to one and a half inch lower down in the latter position. 2. The distance to which the bowels would prolapse through an opening in the situation of the internal ring was noticed, first in the recumbent posture, and afterwards when the subject was made to sit up and lean forward, no traction being made on the mesentery. A very decided difference, over and above that which was due to the weight of the bowel, being noticeable, measurements were made, in other subjects, of the distances between the lumbar vertebræ and the symphysis pubis in these different positions. It was found that in sitting up and leaning forward not only did rotation take place at the acetabulum, but there was an approximation also of the lumbar vertebræ, and therefore of the attachment of the mesentery, to the symphysis pubis, the movement being, of course, greatest at the upper, and least at the lower part of the lumbar spine. The effect also on the bowel of bending the spine somewhat backwards, was noticed and measured, as it seemed possible that an advantage might be thus gained in the reduction of hernia in the living body. So far, however, as was seen by a small number of observations, only a slight advantage could be hoped for by this method of proceeding, above what might happen from the influence of the weight of the intestine. In the next place, the author remarked that the size of a hernia did not altogether depend on the length of the mesentery. For though, of course, some elongation of this ligament—after, not necessarily before, the rupture—must occur when a hernia will reach, say, to the bottom of the scrotum, yet, from the mesentery being attached to the bowel somewhat in a fan-shaped manner, or as a ruffle, so to speak, the distance to which a given point of the intestine will reach will be very nearly the same for some inches or even feet of the bowel continuous with it on each side. This fact was very evident in some of the experiments; the quantity of bowel capable of being pulled out through a hole in the abdominal wall, though not the distance to which it would reach, being found to depend, within certain limits, only on the size of the opening which had been made. After adducing some clinical evidence in support of the previous anatomical facts, Mr. Baker passed on to the consideration of the laxity as distinguished from the length of the mesentery, and said that the object of the paper was by no means to show that hernia was caused usually by simply mechanical violence, as in straining, lifting heavy weights, etc.; on the contrary, it seemed certain that predisposing causes had much more to do with the production of this disease than was commonly allowed to them. Cases in support of this proposition were mentioned, with others which had been brought before the Society at former meetings by Mr. Kingdon, who had collected a large amount of evidence on the subject, in his experience as Surgeon to the City of London Truss Society. There could be no doubt, moreover, that the mesentery was a most important agent in preventing or retarding the increase of hernia after its formation. But the author remarked that these facts were very different from the theory that it is impossible for hernia to occur, whatever be the condition of the abdominal walls, unless some unnatural lengthening of the mesentery take place; and he thought that, however much predisposing causes may be allowed to have to do with the production of hernia, a previous and unnatural increase in the length of the mesentery cannot be considered essential in all cases before the formation of this disease.

In the discussion which followed, Mr. **Kingdon** made several remarks. He noticed the altered contour of the abdomen in subjects of hernia, the prominence below the umbilicus denoting the pressing down of the whole mass of the bowels, through laxity of the mesentery. He believed that the primary seat of the lesion in hernia lay in both the parietal and visceral portions of the peritoneum, and, though anatomists leant to its mechanical origin, he felt convinced, as a Surgeon, that hernia was truly a constitutional disease.

Mr. **Baker** could not see any reason for attributing the altered form of the abdomen in hernial subjects to weakness of the mesentery, any more than of the abdominal walls generally. He believed, rather, that the elongation of the mesentery, when present, was consequent upon the loss of support from the yielding of the abdominal walls.

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Dr. R. **Dundas Thomson**, F.R.S., President, in the Chair.

Mr. **Liddle** brought under consideration the inutility as a practical measure of the 67th clause of 25 and 26 Vict. c. 102, relating to the water supply to houses occupied by the poor. He considered that portion of the clause giving power to Vestries and District Boards to do the necessary works for obtaining a water supply in cases where the landlord refused, to be especially defective. He compared the great powers given by the 64th clause with the 67th, and proposed that a communication be made to the Home Secretary on the subject.

Mr. **Burge** pointed out another evil in the clause, viz., that it referred only to places where water-mains are laid down. He thought it should apply to any place where a supply of good water could be obtained.

Dr. **Ballard** thought the clause referred to had been by no means inoperative, many landlords having laid on water under its provisions. The former course, by application to the churchwardens and overseers, being very clumsy and ineffective.

Dr. **Lankester** suggested that the water companies should be compelled to give a supply on Sundays. The matter was then referred to the General Purposes Committee.

A letter was read from the Royal National Life-Boat Institution, referring to Dr. Marshall Hall's method for the restoration of the apparently drowned, and a modification proposed by Dr. H. R. Silvester, and asking the opinion of the Association on their relative merits.

Dr. **Silvester** was present, and illustrated his plan on a boy. It consisted in laying the patient on the back, slightly raising the head and shoulders, drawing the tongue forwards, and keeping it so by passing an elastic band over it and under the chin. The arms are then grasped just above the elbows, and drawn gently upwards until they meet above the head (this is for the purpose of drawing air into the lungs), and keeping the arms in that position for two seconds. The patient's arms are then turned down, and pressed gently and firmly for two seconds against the sides of the chest (this is with the object of pressing the air out of the lungs), artificial breathing is thus carried on. These efforts are to be repeated fifteen times in a minute until a spontaneous effort to respire is perceived. During the employment of these means excite the nostrils with snuff or smelling-salts, or tickle the throat with a feather. After natural breathing has been restored, warmth and circulation are to be induced by wrapping the body in warm blankets, applying bottles or bladders of hot water, heated bricks, etc., to the pit of the stomach, the armpits, between the thighs, and to the soles of the feet, and by rubbing the limbs upwards firmly and energetically.

In the discussion that followed, Dr. **Gibbon** said he considered Dr. Marshall Hall's plan, which in three cases he had himself successfully tried, more simple; one of the cases was a person apparently drowned, one a case of poisoning by opium, and one by chloroform. He thought Dr. Silvester's plan inapplicable to still-born children.

The **President** remarked that treatment was more generally successful in cases of poisoning by opium, chloroform, or spirits, there being less struggling than in drowning, which was the most fatal cause of asphyxia. It had been found that death from plugging the trachea took place in four minutes, whilst in drowning it took place in a minute and a-half.

Mr. **Liddle** inquired how long the treatment should be continued.

Dr. **Silvester** said that eight hours had been occupied in the treatment, with success. He had often saved still-born children. He did not consider Dr. Marshall Hall's plan free from danger, as in one instance the neck of an adult had been dislocated during the treatment. He believed his method would stand the test of experience, and prove a great boon to humanity.

The thanks of the meeting were unanimously voted to Dr. Silvester

A paper was read from Dr. **Buchanan** on

THE INCREASING PREVALENCE OF TYPHUS FEVER IN THE METROPOLIS,

in which he stated that this disease had been epidemic since December, 1861; that on August 31 last there were in the Fever Hospital 80 patients, a considerable proportion of whom were suffering from diseases other than typhus, and by October 12 there were 180 patients in the Hospital who were all (with some 30 exceptions) suffering from typhus fever. The patients have been chiefly brought from the poor districts of the south and east of London, and they all belonged to the very poorest class of people. The number of patients admitted into the Hospital in September suffering from typhus, was 97; from typhoid, 22. From the 1st to the 20th of October there were admitted, suffering from typhus, 103; from typhoid, 11.

This paper, as well as the communication from the National Life-Boat Institution was referred to the General Purposes Committee.

OBITUARY.

◆

MR. EDWARD TOWNSEND COX.

The following notice of Mr. Edward Townsend Cox, the father of Mr. Sands Cox, is extracted from a biography which appeared in the *Birmingham Daily Post* of November 27:—

Edward Townsend Cox was born in Deritend, it is believed, either in 1769 or 1770, but the exact date is at present uncertain. His father, the Rev. Thomas Cox, M.A. (of University College, Oxford) was, for the long period of forty years, Chaplain of St. John's, Deritend. His mother was Mary, the daughter of the Rev. Edward Townsend Kenwrick, M.A., Vicar of Stratford-on-Avon. The Kenricks claimed an ancestry extending back to the Conquest. At one time they were lords of the manor and hundred of King's Sutton, in Northamptonshire, which was bought from the sixth Earl of Derby by John Kenwrick, of Eccleston House, in Lancashire, where his ancestors had been seated for many generations. In his family the estate remained until 1735, when from the hands of Mr. George Kenwrick, it passed to Sir John Willes, the then Attorney-General, and from him it came into the possession of the Leigh family. It is related in the history of Northamptonshire that Charles I. was for a time concealed by the

Kenwricks in the manor house at King's Sutton, and the chair in which the unfortunate monarch sat during his trial at Westminster is now in the possession of Mr. Cox's family.

Mr. Cox was educated at the Free Grammar School, and having chosen Surgery as his profession, he studied for a period of five years at the General Hospital—then newly opened—under George Kennedy, one of the most eminent Surgeons of that day. After leaving the Hospital, he became a student at Guy's and St. Thomas's, where he attracted the personal notice and friendship of Dr. Clarke and Sir Astley Cooper. On the completion of his studies, Mr. Cox settled for a short time at Stratford-on-Avon, with which place, as we have mentioned, his mother's family was intimately connected; but, finding a country life unsuited to his taste, he shortly afterwards removed to Birmingham. Here he speedily took a high position amongst his professional brethren, and from time to time discharged with credit and usefulness the duties of Surgeon to several of the public institutions. For example, he was for forty years Surgeon to the Town Infirmary (which some of our readers may remember as existing some years ago next the Workhouse, in Lichfield-street), and for a period of almost equal duration he was one of the Surgeons to the General Dispensary. Later in life he took a very active and distinguished part in establishing and conducting the Royal School of Medicine, and still later the Queen's College and Queen's Hospital owed much to his judgment and energy. Of the last-named institution he was for many years Honorary Surgeon, an office he retained until his death. His interest in Queen's College was second only to that displayed by the founder, his son, whom he liberally assisted with funds to establish the institution. In addition to the appointments above mentioned, Mr. Cox, for upwards of sixty years, had Medical charge of the Hospital at the barracks, and the troops stationed in the town; and he used to boast that, as Medical Inspector of recruits for the line, the marines, and the militia, an entire army had passed individually under his examination. Indeed, he was at one time himself very near entering the army, for at the breaking out of the great European war a full Surgeoncy was offered him by the military authorities; but his attachment to Birmingham induced him to decline the flattering distinction.

Of Mr. Cox's Professional ability and reputation we may say that he was thoroughly learned in the science and practice of his art, and was largely endowed with those great qualifications of a good Surgeon—clearness and quickness of perception, decision of character, and firmness of purpose. He was specially remarkable as a most successful Surgeon-Accoucheur, and he is renowned for having been most successful in performing the operation for strangulated hernia, at a period when it was rarely attempted by provincial Surgeons. To the honour of his memory it should also be recorded that when Jenner's great discovery was virulently opposed by many leaders of Medical opinion, and when vaccination was looked upon by the mass of the public as something little short of a crime, Mr. Cox took a prominent and active part in combating popular prejudice, and resisting the opposition of his Professional colleagues. In short, as a Surgeon, he was worthy to be enrolled in the long list of eminent Practitioners who have done honour to Birmingham—the Johnstones, Bright, Pearson, Withering, Freer, Dickenson, and Wood. In all his dealings he was remarkable for that high sense of Professional etiquette, which especially stamped the character of the times and the school to which he belonged, and in which his fame was justly acquired.

With the hasty record of a few personal traits we must bring this notice to a close. Writing of a man who lived to his great age, we need scarcely say that Mr. Cox was temperate in habit, or that he strictly practised Franklin's celebrated maxim, "Early to bed, early to rise." To this regularity was owing the remarkable circumstance that to the last few weeks of his life he was singularly active in body, and that his mind retained its vigour till his closing breath. He was noted for a most retentive memory, which time seemed powerless to impair, and we are told by those who know him well that in consequence of this faculty he was frequently applied to by solicitors and genealogists for information in reference to families long since passed away, and facts and incidents which others had outlived or forgotten. One of his most remarkable characteristics was his dislike to travelling. Owing, it may be presumed, to this distaste, he had actually never seen the sea! To the same characteristic may also be attributed his curious antipathy to railways. Nothing could induce him to admit the usefulness or comfort of this mode of locomotion, and to the last he maintained that the carriage of merchandise would eventually desert the railways for the old-fashioned canals. After this, it must be obvious that his political opinions were those of a Tory of the old school, although it should be added that he never allowed himself to become a warm political partisan. In regard to his Toryism, he used to recount with great glee an incident which took place in the days of the famous Political Union. Mr. George Edmonds was one day addressing a densely-packed throng of Reformers in the open air in Moor-street, when, spying Mr. Cox's familiar pony carriage in the distance, he exclaimed, "Here's a good old Tory coming; make a line!" A line was made, and as "the Doctor" drove slowly through the crowd, he and Mr. Edmonds exchanged good-humoured nods, which so tickled the fancy of the meeting that three hearty cheers were given for "the good old Tory" by the crowd, which, but a few minutes earlier, was full of passionate excitement in the cause of reform.

MARK ROWLAND DAY, M.R.C.S.

The obituary of the week contains the name of Mark Rowland Day, Resident Medical Officer to the Royal Infirmary of Manchester, who died on the 17th ult., at the early age of 36, from typhus contracted in the fever wards of this Hospital.

The unobtrusively useful character of his life, his steady devotion to the institution with which he was connected, and the fact that he fell directly a victim to professional duties, seem to call for some public recognition of his merits. He was one of those valuable public servants whose worth is known only to a limited circle of colleagues and friends, and whose services are fully appreciated only when their place is vacant. The following is a brief outline of his professional career. He entered the Profession as a pupil of the late A. W. Close, Esq., whose death was so recently recorded in this Journal, pursued his studies at the School and Infirmary of Manchester, and after obtaining his qualifications in 1850, remained attached to the Infirmary, with the exception of a brief interval, up to the time of his death, first as Physician's Assistant, more recently as Resident Medical Officer. In these offices, in the latter of which there devolved upon him great and varied responsibilities, he was characterised by a conscientious and energetic discharge of his own duties, and by strict supervision of the officers and servants under him, striving always and anxiously to maintain his department in a state of thorough efficiency. A manner sometimes abrupt concealed a most kind heart, and an extensive acquaintance with both professional and general literature, with great vivacity and rare conversational talent, made him a most agreeable companion.

It will be difficult to find a successor who will be to the Hospital all that he has been, and his memory will live long among those who enjoyed his friendship.

The symptoms of fever set in on Saturday, the 7th, but he did not give way to them till the Wednesday following. Hopes were entertained of his recovery, and even on the day of his death he was considered to be better, but the work which exposed him to the typhus poison had rendered him incapable of resisting its effects, and he sank on the evening of Tuesday, the 17th.

LEGAL INTELLIGENCE.

IMPORTANT QUESTION—THE TITLE OF DOCTOR.

COURT OF CHANCERY IN IRELAND.

(Before the Right Hon. Maziere Brady, Lord Chancellor.)

Friday, December 4, 1863.

INJUNCTION.

THE ATTORNEY-GENERAL v. THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

This was a petition filed at the relation of the Board of Trinity College, praying for a declaration that the respondents were not authorised by their charter to admit any person to the degree of Doctor of Medicine, or to grant a licence, or diploma, or letters testimonials, declaring such persons entitled to such degree, and for an injunction to restrain them from giving degrees or letters testimonials, etc.

The Solicitor-General, and the Right Hon. A. Brewster, Q.C., and Messrs. Lloyd, Q.C., and Dames, appeared for Trinity College; and Serjeant Sullivan and Messrs. J. E. Walsh, Q.C., and W. Smith for the College of Physicians.

The petition stated that by the charter of Trinity College, of the year 1615, it was declared that no person other than the Provost, Fellows, and Scholars should make public profession of or teach the liberal arts in Ireland without special licence from the Crown. Afterwards, by a charter of Charles I., in the year 1637, this privilege of conferring degrees was confirmed, and existed exclusively up to the time that a like power was granted to the Queen's University in the year 1850. Trinity College only had the power of granting these degrees in Ireland up to that time. The qualification required in a candidate of the Dublin University was that he should have a degree in Arts, to obtain which he should have entered College, and paid certain fees, etc. In the seventeenth century, the Provost, Fellows, etc., of Trinity College granted certain premises known as "Trinity Hall" for the use of Physicians; and in 1692, William and Mary granted letters patent to this body, which was the origin of the present King and Queen's College of Physicians. By that charter, Patrick Dun and certain other Doctors of Physic were incorporated as "The President and Fellows of the King and Queen's College of Physicians in Ireland." The charter gave them no power—it was alleged by the petitioners—to grant degrees, but only to authorise parties to practise physic. The College of Physicians had not formerly granted degrees; but, in 1860, they commenced to grant them, and used the following form, viz.:—"We grant licence to A. B. to practise in physic, and do certify that he is entitled to his degree and title of Medical licentiate." The respondents, it was alleged, subsequently added to the letters testimonial a certificate to the effect that the candidate was entitled to the title of "doctor of medicine and licentiate," which the petition charged was an attempt to avoid the use of the word "degree." Upon behalf of the respondents, the case was to the effect, that by their charters they had the power of conferring degrees, and it was contended on their behalf, that even if they had not, that Court had no authority to restrain them, and that if any proceedings were maintainable, it was at law, under the Medical Acts, and not in equity.

The case was only partly opened at the rising of the Court, and having, on the following day, been called on for further argument,

The Lord Chancellor addressed the counsel at both sides, and said that as he was personally interested in the cause, as Vice-Chancellor of the Queen's University, he felt that he should not hear it. He was sure that the Queen's University did not care what degrees the College of Physicians gave, but if that College applied for a charter, it might be necessary to consider what steps should be taken.

Mr. Brewster, Q.C., said he doubted if a charter could be given except to a University.

The Chancellor observed that he was a member of the senate of the Queen's Colleges as well as Vice-Chancellor, and he did not think he ought therefore to hear the case, which could be taken to the Rolls Court; but, even so, a difficulty might arise, for if either party appealed from the order of the Master of the Rolls, it would then come before two Vice-Chancellors in the Chancery Appeal Court, as the Lord Justice was the Vice-Chancellor of Trinity College.

Mr. Brewster, Q.C.: If that principle is to be acted on, the case cannot be heard in Ireland at all.

The Chancellor: You must relieve me from hearing it, at all events.

Serjeant Sullivan stated that the case of Trinity College was rather of a private nature. They alleged that by reason of the granting of degrees by the respondents they had lost certain fees, etc., and, if so, the proper course was for them to proceed at law, and the College of Physicians would be fully prepared to meet them.

The Solicitor-General: We prefer to discuss the matter here, and are now prepared to do so.

The Chancellor: I will send the case to the Rolls, and if there should be an appeal, perhaps it can be heard by some of the common-law judges.

This was the last case in the day's list, and the Court then rose.

MEDICAL NEWS.

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UNIVERSITY OF LONDON.—SECOND M.B. EXAMINATION, 1863:—

PASS EXAMINATION.

First Division.—William Henry Axford, King's College; Henry Charlton Bastian, M.A., University College; James Beddard, Guy's Hospital; Julius St. Thomas Clarke, Guy's Hospital; Arthur Wellesley Edis, Westminster Hospital; James Gwyther, B.A., Manchester Royal Infirmary; Gwynne Henry Harries, King's College; John Wale Hicks, B.A. and B.Sc., St. Thomas's Hospital; John Talfourd Jones, University College; Henry Thomas Lanchester, St. Bartholomew's Hospital; Frederick John Money, St. Thomas's Hospital; Philip Henry Pye-Smith, B.A., Guy's Hospital; Walter Rivington, B.A., London Hospital; Frederick Thomas Roberts, B.Sc., University College; William John Smith, University College; Geo. Thomas Mitchell Southam, St. Bartholomew's Hospital; Thos. Stevenson, Guy's Hospital; John Henry Wood, King's College.

Second Division.—John Cooke, University College; Athenodore De Negri, University College; Henry Stanley Gale, King's College; James Jackson, London Hospital; John Thomas Mercer, Guy's Hospital; Rickard Patrick Burke Taaffe, St. Bartholomew's Hospital.

EXAMINATION FOR HONOURS.

Surgery.

First Class.—James Beddard, Guy's Hospital, Scholarship and Gold Medal; Philip Henry Pye-Smith, Guy's Hospital, Gold Medal: Thomas Stevenson, Guy's Hospital; Walter Rivington, London Hospital.

Second Class.—Julius St. Thomas Clarke, Guy's Hospital; Arthur Wellesley Edis, Westminster Hospital.

Medicine.

First Class.—John Talfourd Jones, University College, Scholarship and Gold Medal; Philip Henry Pye-Smith, Guy's Hospital, Gold Medal; Thomas Stevenson, Guy's Hospital; James Beddard, Guy's Hospital.

Second Class.—Frederick Thomas Roberts, University College; Henry Thomas Lanchester, St. Bartholomew's Hospital; John Wale Hicks, St. Thomas's Hospital.

Third Class.—Julius St. Thomas Clarke, Guy's Hospital; Jas. Gwyther, Manchester Royal Infirmary; Arthur Wellesley Edis, Westminster Hospital.

Midwifery.

First Class.—Thomas Stevenson, Guy's Hospital, Scholarship and Gold Medal; John Wale Hicks, St. Thomas's Hospital, Gold Medal; Philip Henry Pye-Smith, Guy's Hospital; James Beddard, Guy's Hospital.

Second Class.—Julius St. Thomas Clarke, Guy's Hospital; Gwynne Henry Harries, King's College; John Talfourd Jones, University College; Frederick Thomas Roberts, University College.

Third Class.—James Gwyther, Manchester Royal Infirmary; Walter Rivington, London Hospital.

Forensic Medicine.

First Class.—Thomas Stevenson, Guy's Hospital, Scholarship and Gold Medal; John Talfourd Jones, University College, Gold Medal; Julius St. Thomas Clarke, Guy's Hospital; Walter Rivington, London Hospital, and Frederick Thomas Roberts, University College, Equal.

Second Class.—James Beddard, Guy's Hospital, and Philip Henry Pye-Smith, Guy's Hospital, Equal; Jas. Gwyther, Manchester Royal Infirmary.

Third Class.—Arthur Wellesley Edis, Westminster Hospital, and John Wale Hicks, St. Thomas's Hospital, Equal; Wm. Henry Axford, King's College.

UNIVERSITY OF CAMBRIDGE.—The following gentleman has passed the First Examination for the degrees of M.B. and M.C.:—

Mr. Alfred Godson, B.A., of Trinity College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examination, received their Diploma in Dental Surgery at a meeting of the Board on the 8th inst., viz.:—

Samuel Leon Finzi, City-road; Jacob Ayton, Maryport-street, Devizes; William Buckell, New-street, Salisbury; George Laurie, Mortimer-street; Robert Eunson Harrison, George-street, Hull; Joseph Nicholson, North Bailey, Durham; and William Henry Nolan, Charles-street, Berners-street.

NEW FELLOWS.—The following Members of the College, having undergone the necessary examinations for the Fellowship, were reported to have done so to the satisfaction of the Court, and at a meeting of the Council on the 10th inst. were confirmed, viz.:—

William England, Winchester, Diploma of Membership dated December 3, 1847; Edward Ilott, Bromley, July 14, 1848; *Francis Albert Nesbitt, Wolverhampton, May 15, 1854; Thomas Charles Langdon, Winchester, March 19, 1858; and *Joseph Ridge Greenhill, Army, April 13, 1860. (Those gentlemen with an * also passed the examination in Classics, Mathematics, and French.)

At the same meeting of the Council, the following Members of the College, having been elected Fellows at previous meetings, were admitted as such, viz.:—

Henry James Penny, Madras Army, March 5, 1841; Charles Linton Alexander, Great Dover-street, Borough, February 18, 1842; and Richard Brown, Brighton, February 17, 1843.

AD-EUNDEM MEMBERSHIP.—At a meeting of the Council on the same date, John Charles George Robertson, County Asylum, Hanwell, L.R.C.S. Edin., January 19, 1853, was admitted to the *Ad-eundem* Membership of the Royal College of Surgeons, England.

APOTHECARIES' HALL.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, December 3, 1863:—

William Horn, 19, Chapel-street, Pentonville; James Arthur, 18, Nottingham-terrace, N.W.; John Moxon, Nottingham; Samuel Mills, Huddersfield, Yorkshire; John Fred. Wilkin, Sydenham; Edwd. Chas. Hammond, Trinity-square, Southwark; Henry William Newton, Newcastle on-Tyne: John Bennett, Newport, Monmouth; Christopher Coates Lynn, Newcastle-on-Tyne; Fred. John Hawthorn, Uttoxeter, Staffordshire.

The following gentlemen also on the same day passed their First Examination:—

John H. Gornall, Royal Infirmary, Liverpool; T. Bond, King's College.

As an Assistant:—

James Goddidge Anderson, Theddlethorpe, near Alford, Lincolnshire.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

GRANT, JOHN, M.D. Edin., has been appointed Medical Superintendent of the Dundee Royal Infirmary.

JONES, WILLIAM, L.S A., has been appointed Junior House-Surgeon to the Queen's Hospital, Birmingham.

O'CONNOR, MAURICE J., L.R.C.P. Edin., has been elected Mayor of Morpeth.

STEVENSON, THOMAS, M.B. Lond., has been appointed Demonstrator of Practical Chemistry at Guy's Hospital.

TANNER, J, M.D., has been elected Surgeon to the Royal South-London Dispensary.

DEATHS.

BAGOT, CHARLES E., M.D. Glasg., at Charlemont Mall, Dublin, on November 29.

DRURY, THOMAS, Surgeon, in practice prior to 1815, at Shawbury, Salop, on November 21, aged 77.

FITZGERALD, FRANCIS L., M.R.C.S. Eng., Staff-Surgeon, at Carlisle-house, Kingstown, on December 7, aged 34.

FLETCHER, JOHN, M.R.C.S. Eng., at Feltham, formerly of Shiffnal, Salop, on December 2, aged 82.

HUTCHINSON, JAMES, M.D., Q.U.I., of H.M.S. *Rifleman*, at Singapore, China, on October 15.

NASH, WILLIAM C, M.D. St. And., at Rose-hill, Shanahill, Cork, on November 22.

WATT, GEORGE, L.F.P.S. Glasg., at West George-street, Glasgow, on November 29.

WILLIAMS, WILLIAM, M.R.C.S. Eng., at Talgarth, Brecknockshire, on November 25, aged 58.

UNIVERSITY COLLEGE, LONDON.—SESSION OF COUNCIL, DECEMBER 5.—The treasurer (Mr. Grote) requested permission to put up at his own expense in the College, on the wall of the cloister, a mosaic representing scenes and persons connected with the Homeric poems, the mosaic to be executed by Baron de Triqueti, the eminent sculptor of Paris. On the motion of the Master of the Rolls, seconded by Mr. Booth, the proposal was readily acceded to by the Council, with cordial thanks. Mr. Matthew Berkeley Hill, M.B. Lond., F.R.C.S., was appointed Assistant-Surgeon at the Hospital.

THE fiftieth annual meeting of the Glasgow Medical Society was held in the Faculty Hall, St. Vincent-street, on Tuesday, December 1, when the following office-bearers were elected for the session 1863-64:—*President*—Dr. James Stewart. *Vice-Presidents*—Dr. A. M. Smith, and Dr. G. H. B. Macleod. *Treasurer*—Dr. Perry. *Secretaries*—Dr. W. R. Hatrick, and Dr. Maclaren.

LOCK HOSPITALS IN GARRISON TOWNS.—In the *Times* of December 4 appears a letter from Mr. Frederick Robinson, Surgeon to the Scots Fusilier Guards, in which he draws attention to the fact that six years ago he submitted to the major-general commanding the brigade of guards a plan for the establishment of Lock Hospitals, to be endowed by Government, and assisted by the municipal authorities, as the first and most feasible means to be adopted for lessening the amount of venereal disease in the army.

NOT GUILTY ON THE GROUND OF INSANITY.—At the Stafford Assizes, on December 9, Benjamin Holding was charged with the wilful murder of Jane Holding, aged 4 years. The evidence was to the effect that the prisoner had murdered his two children by cutting their throats. That after the commission of the crime he had told his mother that his children had gone to Heaven, and that he had made no effort at concealment. He had generally borne a good character. It was proved that there was a strong hereditary predisposition to insanity, and that he had suffered from neuralgia, and been in a state of melancholy previously to the murder. He was acquitted on the ground of insanity.

AN adjourned inquest has been held on the unfortunate Mr. Charles Law, resulting in a verdict of *delirium tremens*. The Coroner said that the evidence showed that the deceased would no doubt be now alive if he had received necessary stimulants and treatment; but he had not been refused these stimulants by any one that was responsible. If application had been made to an inspector instead of to some policeman, the case would be very different. Under the circumstances, no blame could be attached to the conduct of the police authorities. The inquiry was, however, very necessary, because there was in the first instance a strong suspicion that deceased had committed suicide, and then an allegation was made by the family which seriously affected the police.

ALVAREZ DE LA ROSA *v.* PRIETO.—COURT OF COMMON PLEAS, DECEMBER 8.—Mr. M. Chambers and Mr. Beasley were counsel for the plaintiff; and Mr. J. O. Griffiths for the defendant. The plaintiff, a Spanish Physician, who obtained his degree at Montpellier, and who has resided in this country since 1855, sued the defendant to recover £185 under the following circumstances:—The defendant was one of the Medical officers of the Peruvian man-of-war *Arica*, which was anchored at Blackwall in the latter part of 1862 and 1863, and wishing to go to France, engaged the plaintiff to take his duties on board while he was absent. The plaintiff said that the defendant agreed to pay him £50 per month for so doing. The crew were very sickly, and several of them had to be removed to the Dreadnought Hospital. The plaintiff sought to recover for the period between October, 1862, and February, 1863, admitting a payment of £15 on account. For the defendant it was contended that the plaintiff was not entitled to recover, he not being registered under the Medical Practitioners' Act, and the defendant was called to prove that the contract was for £15 per month, and not £50, and that £30 had been paid on account. Verdict for the plaintiff for £85. Leave was reserved to the defendant to move to enter the verdict for the defendant, on the ground of the plaintiff's non-registration under the Medical Practitioners' Act.

ROYAL INSTITUTION OF GREAT BRITAIN.—At the General Monthly Meeting held on Monday, December 7, William Pole, Esq., M.A., F.R.S., Treasurer and Vice-President, in the chair. John Frederick Bateman, Esq., F.R.S., John Berners, Esq., John Charles Bucknill, M.D., F.R.C.P., William Douglas, Esq., Lady Everest, J. Warrington Haward, Esq., M.R.C.S., Robert James Lee, Esq., B.A. Cantab., Edward Henry Moscrop, Esq., Lieutenant-Colonel Archibald Park, and William Stones, Esq. were elected Members of the Royal Institution. The Secretary announced the following additions to "The Donation Fund for the Promotion of Experimental Researches" (see page 151):—H.R.H. the Count of Paris, £50; Miss Harriet Moore, £50; Miss Julia Moore, £5; William Pole, Esq., £20; J. H. Gladstone, Esq., £100; George Dodd, Esq., £20; (the same promised for next year.) The following lecture arrangements for the ensuing season were announced:—Christmas Lectures, 1863.—Professor Tyndall, F.R.S.: Six Lectures, "On Electricity at Rest and Electricity in Motion," (adapted to a juvenile auditory). Before Easter, 1864.—Professor Tyndall, F.R.S.: Twelve Lectures, "On Experimental Optics." John Lubbock, Esq., F.R.S.: Three Lectures, "On the Antiquity of Man." Professor Frankland, F.R.S.: Six Lectures, "On the Metallic Elements." Professor Marshall, F.R.S.: Six Lectures, "On the Morphological Phenomena of Animal Life." After Easter.—Professor Helmholtz, F.R.S.: Eight Lectures, "On the Natural Law of Conservation of Energy." Professor Frankland, F.R.S.: Six Lectures, "On the Metallic Elements." Professor Marshall, F.R.S.: Six Lectures, "On the Chemical Phenomena of Animal Life." John Hullah, Esq.: Six Lectures, "On the Third Period of Musical History; from cir. 1600 to cir. 1750." Alexander Herschel, Esq.: Four Lectures, "On Falling Stars and Meteorolites."

HORRIBLE TREATMENT OF AN IMBECILE PERSON IN CORNWALL.—A letter from Mr. S. Hodges, the Secretary of the Cornwall Polytechnic Society, appeared in the *Times* of Thursday, relating a case of illegal confinement of an imbecile man, by his relations, under circumstances so horrible, that, but for the undoubted position and credit of the writer, we might well withhold our belief. We are glad to see that the merit of the discovery and of the rescue of the wretched prisoner is entirely due to a member of the Medical Profession, Dr. Byrne. We extract from Mr. Sydney Hodges' letter the account of the discovery :—“ For some years past rumours have been current that the brother of a mason named Porter, living in comfortable circumstances, had been kept for many years in close confinement in a small room at the back of the premises in which Porter and his family reside. Heart-rending cries and howls have been repeatedly heard by the neighbours, especially on cold winter nights ; but, although the sympathy of many was aroused, no one deemed it his duty to inquire into the circumstances of the case, not dreaming, probably, of the horrors that were to be revealed. Rather more than a year ago Dr. Byrne, a well-known Medical Practitioner from the county of Durham, now residing in this town, was compelled to seek the warm climate of Flushing for his health, and incidentally heard these rumours. Not satisfied to allow the matter to remain uninvestigated, he collected all the evidence he could, and was so satisfied that the case was one demanding a strict inquiry, that, with a most praiseworthy decision, he communicated the facts to the Home Secretary, who at once appointed him special commissioner, and sent down two other commissioners, who, in company with Dr. Byrne, went to Porter's house on Thursday last and demanded admission to his brother. Porter himself was absent, but, after some little parley with the other inmates, Dr. Byrne, who had obtained some insight into the plan of the premises, led the way through the house across a yard and up a flight of steps, where, concealed from view round a corner, they found a door, which admitted them to the den in which the lunatic was confined. The sight which met their gaze was too revolting to be described with all its horrid details. The place consisted of four bare, wet, plaster walls, with a small window on one side, and the door by which they had entered ; a doorway opposite, formerly communicating with the house, was plastered up, so as to cut off all communication, except by the flight of steps at the back. In one corner of the room was a wretched truckle bedstead, with cross pieces of wood, rotten with filth, about six inches wide and the same distance apart. On these bare boards was crouched a being more resembling a baboon than a man, drawn and cramped, from long exposure and suffering, out of all form of humanity, stark naked, and with only two old rotten bags for a coverlet. I have said like a baboon, from the peculiar form into which the limbs were drawn ; the knees almost touched the chin, and were pressed close down upon the chest, I imagine for warmth ; the feet close together and bent down one over the other, also, I imagine, for warmth ; the hands clenched and brought up close to the chin ; the arms closely pressed against the sides. The knee and hip - joints were anchylosed ; the elbow - joints were also stiffening. The floor and the walls were one mass of accumulated filth, the floor rotten with it, the stench horrible ; and there are other circumstances of the case too dreadful for publication. For upwards of twenty years the tender mercies of his nearest relatives have consigned him to this living tomb—not a rag to lie upon, not even a wisp of straw ; nothing but the naked board, and the two old bags to cover him. Would a raving maniac be consigned to such a doom ? God forbid ! What, let us ask, is the mental condition of this poor wretch ? Simply imbecile. A most mild, benevolent expression of countenance, a childlike submission to all that is done to him, no symptom of violence or even anger of any kind, and strong indications of intelligence in many things, even after these weary years of neglect and cruelty. Yesterday, in company with Dr. Byrne and some friends, I visited the poor creature, for the purpose of getting a sketch of the remarkable position in which he had remained for so many years. The arrangements being then completed, two intelligent keepers from the county asylum washed, dressed, and took him away to that admirably conducted establishment at Bodmin, where we fervently hope that both his mental and bodily condition may soon be improved. Of all the moving incidents of the case not the least was the scene on emerging from the house. Many hundreds of people were collected round the conveyance, to which the keeper carried him in his arms like a child. ‘ My God ! can that be a man ?’ ‘God bless you, Dr. Byrne !’ were the exclamations that burst from the lips of the multitude. Few eyes were dry, especially when some who had known him when a strong, intelligent youth, pressed forward and shook him by the hand. I am told the Commissioners stated that in an experience of forty years they had never met with a case so awful.”

Multiple Lipoma.—M. Broca relates an interesting case, exemplifying not only the fact, which was already well known, of lipoma existing in the multiple form, but of its generalisation after ablation. The patient became the subject of lipoma of the haunch in 1817, and in 1823 the tumour, which weighed 2500 grammes, was removed. Five months after the operation a great number of lipomatous tumours were developed over the entire surface of the body, and so numerous were they that it was impossible to count them. At a preceding period 2080 were counted, some being cutaneous and others subcutaneous, and varied in size from that of hemp-seed to that of an egg.—*Bulletin de la Société Chirurgie*, iii., 243.

BOOKS RECEIVED.

Edinburgh Medical Journal. December, 1863. Edinburgh : Oliver and Boyd.

⁂ A good paper on Dysentery in the Tropics, by Dr. Mackay. He notices the necessity of good soft flannel. Dr. Matthews Duncan gives a short account of Diphtherial Gingivitis in Lying-in Women ; and Dr. Donaldson a thoroughly practical paper on Cholera in India in 1861. He saved 12 out of 18 cases, not by specifics, but by common sense treatment. He speaks well of true chloric ether as a stimulant. Dr. Donkin has a good article on the Action of the Womb ; and Dr. Veale a very good one on Antiphlogistic Treatment.

The Australian Medical and Surgical Review. September, 1863. Melbourne : F. Baillière.

The Teeth as supplied by Nature and preserved by Art. By M. C. Rogers, M.R.C.S. London. 1863.

On Life and Death. By William S. Savory, F.R.S. London : Smith, Elder, and Co., 1863.

Special Therapeutics. By J. C. Lory Marsh, M.D. London : R. Hardwicke, 1863.

The American Journal of the Medical Sciences. October, 1863. Philadelphia : Blanchard and Lea.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Regular Reader.—We think that Heidelberg or Göttingen would best answer your purpose.

Several communications are unavoidably postponed until next week.

Mr. Barrett's letter, and the letters in reference to the Royal Medical Benevolent College shall appear next week.

A Public Servant.—A man cannot expect to be suddenly raised to a conspicuous position without having the opinions which he has previously avowed publicly canvassed. Our criticism was founded on an examination of the general tone and bearing of Mr. Rumsey's work, which, in our opinion, errs on the side of advocating too great an amount of State interference, or at least such an amount as would be incompatible with the constitution of this country and the character of its people.

The Case of Symm v. Fraser and Andrews.—Subscriptions towards defraying the legal expenses of Drs. Fraser and Andrews in the late trial are received at the office of the *Medical Times and Gazette*, 11, New Burlington-street. We are informed that the defendants' expenses will not be less than seven hundred pounds.

Hyposulphite of Soda in Typhus.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I should be obliged if any of your readers would give me the results of their experience in the treatment of typhus with the hyposulphite of soda—the ordinary dose—and the rules for administering it.

December 8. I am, &c. Medicus.

Recent Changes in the Medical Council.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I read with much pleasure your leading article of November 28, on the recent changes in the Medical Council. I think it most judicious in the Privy Council to take the initiative in showing that the seats in the Medical Council are not to be permanent, as it would simply end in the important subjects brought before it dwindling down to mere routine, instead of being discussed with that energy which is so requisite to promote the interests of our Profession. I trust that with the infusion of fresh members into the Council a new era of its existence will commence, and that at its next meeting, we may see the reporters admitted to its discussions, and that the wishes of the whole Profession may be acceded to by an amendment of the 40th section of the Medical Act.

I am, &c. M.R.C.S. Eng.

The Late Mr. Ancell.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE

Sir,—Permit me to record my entire concurrence in all that is stated of my lamented friend and colleague, poor Ancell, in the admirable notice of his death in this week's *Medical Times*. It has, however, this error—he was joint honorary Secretary with myself to both the National Association and the Institute, and we were together unanimously chosen by those bodies as the two representatives of the general practitioners at the conferences on Medical reform held at the College of Physicians. As the notice in the Journal describes him as "the honorary secretary," perhaps you will think it well to correct this in the next Journal.

I am, &c. JAMES BIRD.

6, Seymour-street, West, Connaught-square, December 5.

ALCOHOLIC STIMULANTS IN FEVER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I have read with interest Mr. Harding's letter on the above important subject in your Number for November 28. As I am one of those from whom he solicits information, I may be granted, perhaps, space in your columns for a few remarks.

There can be no doubt but that there is in our Profession a contrariety of opinion as to the propriety of administering alcoholic stimulants in typhus. Most Practitioners do recommend them, but many (and an increasing number) do not; amongst the latter I rank myself. My experience has been neither very short nor very limited, extending as it does from 1823 to the present time, in a rural district of several miles in diameter. I have seen both plans—the alcoholic and the non-alcoholic—fairly tried, and am compelled by results to give in my adhesion to the more recent of the two. In 1859, I published a small volume, wherein I detailed sundry authorities besides my own for the practice, and evidence has been accumulating ever since, and I have again this year put through the press a small volume confirmatory of the first. As surely as we have been astray in the matters of venesection and mercury, so (as I believe) are the majority of our Profession now in the dark as to the true value (if any) of alcoholic stimulants.

May I be allowed a second or two on the case given by Mr. Harding. The patient was *in extremis*, but how? Thus, as I conceive: He was oppressed by two poisons present in his blood—the typhus poison and that of the metamorphosed tissues. Now, on the face of the thing it cannot but excite one's suspicion to hear that the effects of these two poisons are to be successfully combated by the presence of a third—alcohol. Does it not look more like rational treatment to seek to remove the offending materials from the system? And this we proceed to do by administering muriatic or nitric acid to neutralise the products of the disease (which are alkaline); and by giving some diuretic drink, as nitre, whey, etc., seeing that the products, being albuminous as well as alkaline, will seek the kidney as their natural outlet.

While this is doing the patient, of course, has to be nourished and other ways supported. This is done by sedulous attention to the natural tonics—food, air, and cleanliness—while some camphor, or it may be quinine, or possibly pepsine, assists the digestive organs to prepare chyme, chyle, and ultimately blood.

I may say, in conclusion, that typhus is not hereabout a disease any thing like so fatal as the records of fever Hospitals make it. Instead of the mortality being 20 per cent. as in them, I think it does not here ever exceed 10 per cent., and is oftener even half of that.

Bodmin, December 1. I am, &c. HENRY MUDGE.

USE OF ALCOHOLICS IN DISEASE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Your correspondent, Mr. Harding, in the last Number of the *Medical Times and Gazette*, expresses profound astonishment that any Practitioner should ever think of treating disease, and particularly fevers, without the aid of the alcoholic compounds; and as he is particularly wishful to know whether "the opinion of the Profession is divided on the subject," it may be of use to him, and to your readers generally, if I state briefly my own opinion, practice, and experience. My attention has long been directed to the question, in consequence of seeing the numerous instances of drunkenness and moral ruin resulting from the habit formed in obedience to the recommendation of some Medical attendant. Besides this, the administration of these beverages tends to keep up many troublesome symptoms in the course of certain diseases, particularly of the chronic kind, and greatly interferes with the treatment for their removal. For these reasons I have long since ceased altogether to employ alcoholic stimulants.

During the past two years I have treated in public and private practice nearly three thousand cases, and have never ordered wine, brandy, or malt liquors in any instance. Most of the cases have been characterised by asthenia, and have comprised almost every form of disease, both acute and chronic. A large proportion of these cases have been fevers of the adynamic type. My treatment has been satisfactory and successful, the duration of the cases shorter than formerly, and the general results of a lengthened trial are quite conclusive to my own mind of the truth that diseases of all kinds are more manageable and more curable without alcoholic stimulants than with them. I freely order nutrient preparations from animal food, such as hot beef-tea in some cases, or cold jellies in others, together with cocoa, prepared milk, tea, and nutritious fluids of all kinds. Alcoholics are not nutritious. It is now a demonstrated fact, that alcohol, whether taken in the form of wine, brandy, or beer, is exhaled from the lungs and the skin, and thrown off from the system by the other emunctories in the same form in which it entered it. It is not burnt up, as was formerly supposed, nor does it subserve any useful purpose whatever in the animal economy.

I am not prepared to say that I would never, under any circumstances, employ alcoholic stimulants; but the Profession has long attached an extravagant but unmerited value to them, and it is now high time that a change in opinion and practice should take place. I am, &c.

Sheffield. J. W. BEAUMONT, M.D.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—As a very serious imputation, having the appearance of great plausibility, has been cast upon my treatment of a case of typhus fever by Mr. Thomas Massey Harding in your last Number, I deem some reply necessary. The question at issue, namely, the non-alcoholic treatment of typhus, is not a new one, nor am I the only Medical man who maintains that typhus can be treated more safely, and with less mortality, without alcoholics than with them, as I shall endeavour to show.

With regard to the case upon which the charge against me is founded, I would impress upon the minds of the Profession the following facts. That the case was a severe one, occurring in an old man 65, much enfeebled by age, and by a previous attack of diarrhœa long continued. That I could not get him to take medicine on account of its nauseous taste. That my treatment was not fairly tried, inasmuch as wine was frequently given to him by anxious but mistaken friends, and worse still, that the brandy system was adopted at last. Under these circumstances I do not wonder that the patient died; I submit that there was ample time for the alcoholic treatment to have produced its boasted effect, considering the rapidity of its action.

I believe that the exhaustion in this case was chiefly the manifestation of the depression of the nervous and vascular systems, following after the primary effects of alcohol had passed away, and that, had my treatment been fairly continued to the end, there would have been a very good probability of recovery.

We have emerged from the bleeding fallacies of fifty years ago, and from the mischievous mercurialisations of John Hunter's time. I say when shall we give up these delusive notions of the efficacy of the brandy bottle as a sovereign remedy for nearly all diseases, many of them diametrically opposite,—from a chronic dyspepsia to a fractured leg? "Truly we may call this a port wine stewed generation."

My attention was first called to this subject, some years ago, by a very striking paper of Mr. Higgingbottom, F.R.S., of Nottingham, "On the Non-Alcoholic Treatment of Disease," including typhus, and subsequently read before the British Medical Association in 1862. And although prejudiced against this system, by having been educated in an opposite school, I found that his views were correct, and fully corroborated by many severe cases that I have treated upon this plan.

My treatment of typhus has been to begin at the outset with emetics, mild purgatives, the mineral acids, and quinine; to secure cleanliness and ventilation, and to give the patient freely true nutriment, as milk, eggs, beef-tea, broth, etc. Under this mode of treatment I am prepared to say that almost any case of typhus fever will be carried to a favourable termination. So much cannot be said of alcoholic treatment. The case upon which the charge against me is made, is the only one that I have lost. In one of my cases the patient was so far reduced as to resemble a person in the very last stage of phthisis, and, in addition, had sloughs over the sacrum and scapula.

With regard to the action of alcohol upon the human system, all toxicologists agree in defining it as a narcotic poison. Volumes might be written with quotations from authors and men of eminence, all tending to show the pernicious effects of this poison upon the human organism. The experiments of Dr. Beaumont, in the case of Alexis St. Martin, prove that alcoholic drinks injure the stomach, and retard the process of digestion. The experiments of Mr. John Davy, F.R.S., Inspector-General of Army Hospitals, prove that the ingestion of alcohol lowers the animal temperature in proportion to the quantity given. The experiments of Professor Schultz, "On the Rejuvenescence of Man" (Berlin, 1842), prove that alcohol hurries on the blood-vesicles to their last stage of development, and induces their premature death. The experiments of Dr. Beddoes, in his "Hygeia," prove that intoxicating liquors are the most pernicious substances received into the stomach.

Professor Moleschott, of Erlangen, says alcohol does not effect any direct restitution, nor deserve the name of an alimentary principle. The experiments of Dr. Edward Smith, F.R.S., in 1859, prove—1. That alcohol interferes with alimentation, and that its power to lessen the salivary secretion must impede the digestion of starch. 2. That it greatly lessens muscular tone and power. 3. That there is no evidence that it increases the nervous influence, whilst there is much evidence to prove that it lessens nervous power, as shown by the mind and muscles. 4. That alcohol is not a true food, and that it neither warms nor sustains the body by the elements of which it is composed. Dr. T. K. Chambers, in his "Renewal of Life," says, "What is a stimulant? It is usually held to be something which spurs on an animal to a more vigorous performance of its duties. It seems doubtful if, in the healthy nervous system, this is ever the effect of alcohol, even in the most moderate doses, for the shortest periods of time. It is clear that we must cease to regard alcohol as an aliment, since it goes out as it went in, and does not leave any of its substance behind it." Dr. T. K. Chambers, in the *Medico-Chirurgical Review* for July, 1861, says:—"We think that the evidence, so far as it has yet gone, shows the action of alcohol upon life to be consistent and uniform in all its phases, and to be always exhibited as an arrest of vitality. The circulation, indeed, retains its industrious activity, but receives and transmits a less valuable, a less living freight, and thus becomes the cause as well as the effect of diminished vitality."

Dr. Barnes, F.R.C.P., in his inaugural address to the students of the London Hospital, in 1860, says:—"The first patient sick with fever or consumption is a victim to malaria rising up from the sewerage, sodden soil, etc. Further on is one whose energies are destroyed, whose body is diseased, whose mind is debased by indulgence in those accursed drinks, whose use is abuse, whose purity is foulness, to adulterate which is a superfluous or impossible fraud."

But I might go on multiplying the opinions and experiments of men of eminence upon this subject *ad infinitum;* and although they do not bear upon the point in question, viz., the non-alcoholic treatment of typhus, they have a most important bearing in proving the action of alcoholics upon the healthy human system. And if these facts be true with regard to health, I contend that they apply with double force to states of disease, especially of an adynamic character, when the vital powers are at a low ebb, and when the system is less able to resist their injurious influence. These experiments show most strongly that alcohol depresses nervous force; and I contend that by this action they are most injurious in typhus and other affections.

But to come more immediately to the point at issue—the non-alcoholic treatment of typhus—Mr. John Higgingbottom, F.R.S., F.R.C.S., of Nottingham, in a paper published in the *Lancet*, August, 1857, says,—"Very early in my practice I discontinued the use of port wine in typhus fever; after twenty years of constant and unremitting attention to the effects of alcoholics, I discontinued them altogether, both as a medicine and a beverage, from not only a conviction of their inutility, but also from the consciousness of their being very dangerous agents, in no case admissible in acute disease, and also from a belief that chronic disease was much more manageable without them. I am induced to bring the simple facts before my Professional brethren, conscious of the superior efficacy of the treatment of disease without their use, although I believe it to be contrary to the received opinion and practice of the Profession, and I know by many it will be considered quite Utopian. I was educated in the opinion that port wine was absolutely necessary in the low and sinking state of typhus fever. The typhus fever was prevalent in a village in Derbyshire, and it was observed that a number of the rich patients died who had been treated with the artificial stimulus of wine, and that the poorer lived who had little else but natural stimulants, pure air, pure water, and simple diet. From this fact I was induced to try the experiment of treating typhus without wine; in 1813, for five months, nearly half of my time was devoted to visiting patients with typhus; my treatment was to secure ventilation, cleanliness, and particular attention to digestive organs, commencing with emetic dose ipecacuanha, aperients, salines, and in the low state a decoction of Peruvian bark (quinine not then known), and a light, simple, nourishing diet. After finishing my long attendance with this simple mode of treatment I had only lost two patients; both of them had wine given to them unknown to me by a family in the neighbourhood. I have not prescribed or recommended wine in typhus fever since that time, now upwards of forty years, and my treatment has been attended with eminent success. In 1848, I attended twenty-seven cases of typhus: at one time several of them had bad symptoms, great depression, delirium, intermittent pulse, etc. The same early treatment was pursued, and the strength sustained by mild nourishment, and all the patients recovered. I believe the wine treatment would have been fatal to several of them; there is no doubt patients often recover in typhus fever in spite of the wine given them, although in my opinion, and from my long practice and observation, its administration in typhus has always been injurious and often fatal in its effects."

I will now turn to an excellent little work just published by Mr. Mudge, of Bodmin, entitled, "A Guide to the Treatment of Disease Without Intoxicating Liquors," from which I make the following extracts:—

"The results of the trials that I have made (of the treatment of disease without alcohol) have been very decidedly in favour of abstinence, and consequently alcoholic drinks have disappeared from my list of medicines." And, speaking of fever, this gentleman, after giving directions for a treatment similar to Mr. Higgingbottom's, says:—"The following of these directions will save all necessity for having recourse to wine or brandy." And, in speaking again of the treatment of typhus, the same gentleman says:—"It is very rare that under the steady exhibition of camphor that the circulation so fails as for the cardiac and radial pulses to lose their sound and strength. If, however, as I believe it quite possible, a sufficiency of food can be digested, there will be in this new, though diminished blood, sufficient stimulus to keep on the necessary circulation." I find in the same work a case of typhoid fever related, in which the patient was reduced to the very verge of the grave; never once took one drop of alcohol, and yet made a most rapid recovery.

Dr. Collonette, of Guernsey, has abandoned the use of intoxicating liquors from his practice since 1841, and during that time, though engaged in a very extensive practice amongst all ranks and grades of society, says that he has never once, during that time, found their use necessary.

I am, &c. R. L. BAYLEY.

Stourbridge, December 1.

ARMY MEDICAL DEPARTMENT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In a recent issue of your valuable Journal you were pleased to say that you invited discussion on certain topics connected with the Medical Department of the Army. It is only by taking up a single subject, describing its nature and operation in actual practice, and comparing the relative advantages of a different procedure that truth can be elicited or benefit derived. There is none of more vital consequence, more earnestly canvassed, and more generally condemned, than the patronage exercised by the Director-General of appointing whom he thinks fit to the administrative ranks of the Department.

On this, the most important subject which agitates the minds of Regimental-Surgeons, the Deputy-Inspector-General offers no opinion, but the practice is commonly defended on the specious pretence of selection for merit.

But what is plausible in theory is often pernicious in practice, and Regimental Surgeons have long since arrived at the same conclusion as the veteran premier, that merit is another name for favour or interest, and all the Medical officers (including the present Director-General, Inspector-General Taylor, Deputy Inspector-General Mapleton, etc.) who were examined before the Royal Commission, were decidedly opposed to promotion by selection, knowing full well that, scattered as Medical officers are all over the world, occasionally not visited for years by any superior, it would be utterly impossible to form even an approximate opinion of relative merit.

The experiment of promoting a junior is hazardous and uncertain; he may possess the qualities for which he gets credit, his topographical report which appears in the Blue Book may be original or not, but it is quite certain that he has superseded his betters, who are naturally dissatisfied and disheartened by the operation of a system which, while it is not conductive to the public advantage, (a) is most prejudicial to their interests and damaging to their reputation in the eyes of their associates, military and Medical, who unjustly ascribe the supercession to descreditable antecedents, or possible inferiority.

It is not surprising therefore that the present Director-General should connect the harmony and good feeling which exist in the scientific corps of Artillery and Engineers with the invariable practice of promotion by seniority, (b) and as its advantages far outweigh the imaginary benefits ascribed to selection, it is to be hoped he will be able to give effect to his own prepossessions and recorded opinion, and at the same time fulfil the just desire and general expectation of his Department.

I am, &c. A REGIMENTAL SURGEON.

P.S.—Will the Deputy-Inspector-General, or any of your correspondents, tell us why promotion by seniority, which works well in, and is acceptable to, Artillery and Engineers, is unsuited to the Medical Department of the Army?

ON THE APNŒA OF DROWNING, CHLOROFORM, ETC.

By CHARLES KIDD, M.D., M.R.C.S.,
Associate Member Surgical Society, Ireland, etc.

The following cases possess little intrinsic importance, either in style or research, except as the early result of some well reasoned out deductions from a long series of physiological experiments—several hundred experiments in number on the lower animals with chloroform, where it was elicited that the "cardiac syncope" of the late Dr. Snow is not syncope, nor anything cardiac at all; so much as that all such animals poisoned by chloroform cease to exist for a time by narcotism of the respiratory muscles and diaphragm, and life is restored by a continuous supply of "induced" electricity (the nearest thing to nervous action that we possess) to these muscles and diaphragm.

In a long series of experiments on large dogs, cats, rabbits, etc., with chloroform—several hundred such—where the animals were left for dead, and were, to all intents and purposes, dead if so left, many means of restoring life have been tried, but failed; but by taking as much as possible exactly similar cases,—some that have finally ended in unmistakable death, and others that would have so ended—no agent seems to have had the slightest effect in rekindling the vital spark but the magneto-electric induction form of electricity (now known so well under the name "Faradisation"), and this agent through the diaphragm, phrenic nerve, and respiratory muscles. The "cardiac syncope" of former years, still the dogma of the Hospitals, is a loose interpretation of certain post-mortem changes; a "post hoc" placed for a "propter hoc;" the death we now know is not at all cardiac, but respiratory; electricity to the heart only kills the animal with greater certainty. We have, in a word, the same kind of death as in drowning or suffocation, where persons are buried alive under a heap of earth,—apnœa, by fixture of the respiratory muscles. Set these actively at work once again, and we get rid of the chloroform and restore life.

It is scarcely three years, perhaps, since these views as to apnœa being the chief source of evil in chloroform accidents, and electricity the remedy, were clearly explained and demonstrated in the masterly researches of Lallemand, Perin, and Duroy. Not one of our recent books in the hands of pupils refer to these researches, and in all we have the utmost confusion and error as to fatty heart: the Marshall Hall ready method as a "perfect cure," balloons for inhalers, and electricity to the heart! Even the committee of the Medico-Chirurgical Society, now that we are far advanced in the true science of the subject, are encouraged to go back to the alphabet of the question, and adopt all the patented inhalers, and other errors.

It is not every day, nor, perhaps, once in a year, that one may meet cases (let his attention be ever so sedulous in Hospitals) where a patient is left for dead, or actually taken to the dead-house after a chloroform accident, and yet where one might pronounce almost with a certainty that electricity applied in a proper manner would restore life. Even in some ingenious experiments of my friend Dr. Richardson, where resuscitation was sought to be brought about by caloric, I think I could see the effect was produced rather by vivisectional irritation and electricity to the respiratory nerves.

Case 1.—A child of four years was placed under chloroform by M. Friedberg (*Archiv. für Pathologische Anatomie*, t. vi.), for a trivial operation. Four grammes of chloroform were dropped on a sponge and compress; the pulse soon became small; the inspirations laboured; face livid; the respiration was observed then gradually to cease. The child was turned on its side, sprinkled with cold water, ammonia applied to the nostrils, the epiglottis and larynx freed from mucosities. Two or three minutes after the first alarm the pulse totally ceased. Efforts at artificial respiration (much after the Silvester method) were then commenced, the abdominal viscera being pressed towards the diaphragm, and this, in its turn, with the thorax, alternately acted on, something after the normal rhythm of respiration. At the expiration of three minutes more there was no sign of life. The child was pronounced dead. The "Faradisation" apparatus of M. du Bois Reymond was sent for; one of the electrodes was applied over the phrenic nerve—"dans le point où le muscle omo-hyoidean croise le bord externe du sterno-mastoidean;" the other electrode was pressed as energetically as possible into the seventh intercostal space; these applications were made alternately. After the ninth or tenth interruption of the circuit, the diaphragm began to contract; shortly the radial pulse became perceptible. The same means were continued till the child at length began to cry at the pain of the shocks through the nerve, and it ultimately recovered.

This is a simple translation of the chief points of this case, but, taken in connexion with what we now know, as said already, of several hundred experiments on the lower animals, all apparently dead, till revived in the same exact manner, it is full of interest.

Case 2.—"Early one stormy, ice-making morning in March, 1861," says Dr. Alfred Garratt, of Boston, (a) "I was requested to go in haste to see a man who was just taken out of the water in our harbour; he was supposed to be quite dead already, as he had been in the water some time before he could be found. The messenger said the body and limbs were 'cold, stiff, and corpsy,' the eyes and lips very much swollen. He was an athletic seaman, second officer of the clipper ship *Black Eagle*. He had accidentally fallen from a height into the water, and had sunk to the bottom. When I arrived, the bystanders exclaimed 'It's no use, he is stone dead. Oh! he is utterly drowned—dead as death,' etc. Instantly we inquired for the nearest room. Those who were near and saw the accident said the man was not seen to rise after he fell into the water until some twenty or thirty minutes afterwards, at least not till grappling irons were sent for and used, and some two or three sailors had jumped in and dived repeatedly for him in vain. One of these finally seized the corpse by the boot, and after most desperate efforts succeeded in bringing it to the top of the water. This sailor told me he found the body sticking in the mud head downwards, and the water some fifteen feet deep.

"All was alacrity now, every one seemed to work with a will, though evidently against hope; some with warm, yes, hot clothes, others with their strong, rough hands squeezing and kneading the muscles; thus relays of some half-dozen each were organised, and worked on like good fellows." Here occurs a long detailed description of various manipulations of the Silvester method kind, which I need not transcribe. A stomach tube was also introduced, and a large quantity of water discharged by its means. I think I have left out nothing essential.

"Next we commenced in earnest the application of electricity; the electrodes, covered with bits of wet rag, were applied, the positive to the back of the neck, while the other was at first glided along over the shoulder to the side of the neck, over the pectoral, serratus, and other chest muscles, changing back and forth every minute, changing the site of the electrodes over the pneumogastric, then to the brachial plexus, then over the trapezius and cervical spine, then about the lower part of the pectoral muscles and back and the whole waist. The current was then used one minute as direct, and the next minute as inverse current, and this was continued for one hour"!! (The notes of exclamation are mine; they are not undeserved.)

"While other things were being well done, I now directed the current through the chest. There was perceived a quick, short inspiration, much like a sigh, but unfortunately this could not be reproduced. I next loosened the binding screw of one of the conductors; the positive was at the nucha, the negative was adjusted with a small sponge—tipped electrode moistened and placed in the left nasal fossa. I made and broke contact in this manner with my hand every ten or fifteen seconds. This was a renewed success. Its rallying power was wonderful, sighing-like inspirations were thus pretty regular, but seldom produced, and at the same time the skin became softer and warmer. It is noteworthy that these sighs or inspirations were so slight, and amid such brisk work, that they were discredited by some of the eye-witnesses. Those processes were pursued, however, for some half hour longer, during which time the electrodes were placed respectively on the nucha, and in the nose, then the diaphragm. But the phenomena of life appeared to flag a little instead of increasing.

(a) "In nine cases out of ten selection will not promote the best men."—Dr. Mapleton in Blue Book.

(b) See evidence before Royal Commission.

(a) See *Boston Medical and Surgical Journal*, Sept., 1861.

"At this juncture I resolved to resort to electro puncture; long gold needles, well insulated (except at their points), four in number, and four inches in length each, were carefully inserted in quick succession, two in the lower part of each pectoral, plunging them inwards and downwards, transfixing the diaphragm, solar plexus branches, and phrenic nerve branches; this made no visible impression, but the instant the electrodes were now removed and brought in contact with the ball heads of the needles there was produced, after the delay of some five seconds or so at each contact, most manifest respirations, to the infinite delight of all present, for this," adds Dr. Garratt, in a sort of amiable and grim joke, "was the *argumentum ad hominem!*

"All were now inspired with courage;" and we have next a long description of various other modifications of warm frictions; rollings; the electrodes run along the spine, then over the side of the neck; the needles still in the diaphragm; also "the ivory electrode in the Schneiderian membrane was held by an assistant, so as to be readily touched by the attached electrode in use. It now became evident to all that life was actually reassuming dominion in the body; the sighing was deeper and more like a natural inspiration; the cadaveric appearance and 'goose flesh' were being replaced by more smoothness of skin and more warmth; there were seen tremulous motions in the limbs whenever the nasal electrode was touched, and there was less gurgling in the throat. In the course of the next half hour the heart beats became apparent, and soon the pulse was found at the wrist; the respirations were now partially self-induced. The man was still deaf and blind; the eyes terribly swollen, though he now sighed, groaned, and struck about with his limbs. A little hot brandy-and-water was next poured into his mouth, and he swallowed it. I touched the electro puncture-needles no more with the current, but left them in their place for several hours; the capillary circulation, however, increased; reflex action became not a little aroused to the general machinery and chemistry of life."

The next six hours' procedure I will not detail, for there was nothing remarkable. At the end of ten hours the man became sensible, could speak, see, and take nourishment; he had "naps" of refreshing sleep. The next day reaction set in, and he felt sore, tired, and feverish, and was at times a little delirious." He was, at the period of drawing up the case, "entirely recovered," his case the astonishment of his friends in Boston; and Dr. Garratt concludes by saying:—"I believe the man's life would have been lost if we had relied on the Marshall Hall 'ready method' only. This case is not without instruction, whether as to electricity or galvanism, *i.e.*, the primary current, or as to Faradaism, *i.e.*, the secondary or induced current;" and in this verdict I think the generality of readers will agree. We can now, in fact, see very plainly that the recovery was due to the action of the Faradisation current through the electrode along the neck, and through the needles in the diaphragm.

Case 3.—The third case I would wish to quote, but really the first perhaps, in point of time, is that of a man named James Rock, described by Dr. Ferguson in the *Dublin Medical Press*, who was taken out of a canal supposed to be dead. "I was with him in four or five minutes," says this gentleman, "and found him lifeless, cold, and livid. I had him forthwith removed to the Infirmary; I learned in the meantime, from persons who witnessed the scene, that he was at least six or seven minutes completely under the water, and he had been in a state of intoxication. Finding the abdomen very much distended, I introduced the stomach-pump, and discharged by it about a gallon (?) of water, strongly impregnated with spirits. Seeing that this, with all the ordinary means of restoring suspended animation, had failed, I determined on trying electricity. I made an incision below the seventh rib, cut down on the diaphragm, and applied the conductors of a galvanic battery." (And here I may say I begin of late to doubt whether in default of the more delicate magnet machine "six current" machine, or electric brush, so praised by Trousseau, all forms of Faradisation, we might not try common galvanism.) "The effect was instantaneous, and surprised all the persons present; the muscles of the chest and abdomen became engaged, and after a few moments I could see this spasmodic action gradually disappear, and the regular action of the chest and respiration come on, which soon increased till breathing became quite apparent, as also the circulation." The man quite recovered.

"This case must fully establish the utility of electricity," adds the author in suspended animation (apnœa ?) by acting indirectly on the phrenic nerve," etc. I would only add that in all the previously referred to experiments on animals, the Faradisation plan was that used and found most gentle and effective.

Case 4.—For the fourth case, I must refer, I think, to the *Medical Times and Gazette*, March 28, 1863, and to your Journal, *passim*, to commentaries on the case; it is one precisely similar to Case 1, and the plan of Faradisation undertaken for exactly the same object; in fact, after a long study of the experiments on animals, already so often referred to, I am perfectly satisfied of the vast superiority of Faradisation to the phrenic nerve over all other means of setting up artificial respiration and restoring life I was watching for a case like this one, which opportunely happened one day exactly as described. It is too soon yet to have many such cases, but backed as these are by several hundred experiments on the lower animals, they are not without interest.

P.S.—A very practical discussion recently took place at the Pathological Society, where a specimen of that factitious or enigmatic disease, "fatty heart," was exhibited; the subject of it had had chloroform several times without any untoward syncope or weakness as described in standard books; while another heart, of a patient who had actually died at St. George's Hospital of chloroform, was contrasted with it, and was found to be almost a typical instance of healthy muscular heart, whereupon much marvel or surprise was expressed; but I have tried in vain to show that this is not at all a matter of surprise, and, as a rule, the death begins in the lungs and diaphragm, not in the heart. One speaker who had just seen a death from chloroform also mentioned that it was while the patient was in a state of excitement before complete anæsthesia that suddenly death happened. This also arises from apnœa. So that neither of the points is new, or deserving to be placed amongst the archives (as suggested) at Berners-street.

Sackville-street, W., November.

COMMUNICATIONS have been received from—

Mr. James S. Bird; Anthropological Society; Dr. Althaus; Dr. T. B. Peacock; A Public Servant; Apothecaries' Hall; Dr. W. R. Hatrick; Mr. Richard Griffin; Mr. S. Highley; Royal Institution; Dr. B. Walter Foster; M.R.C.S. Eng.; Dr. Devenish; Harveian Society of London; Mr. John Wright; Mr. John Barrett; Medical Society of London; Mr. W. Travers; Mr. W. B. Murray; Mr. E. Pye Smith.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 5, 1863.

BIRTHS.

Births of Boys, 941; Girls, 854; Total, 1795.
Average of 10 corresponding weeks, 1853-62, 1697 9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	724	652	1376
Average of the ten years 1853-62	665·0	662·5	1327·5
Average corrected to increased population..	..	..	1460
Deaths of people above 90	..	..	..

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	4	..	4	2	5	11	4
North ..	618,210	7	5	24	2	8	13	6
Central ..	378,058	6	2	9	1	5	6	..
East	571,158	4	1	23	2	9	17	4
South ..	773,175	5	10	28	4	8	17	8
Total.. ..	2,803,989	26	18	88	11	35	64	22

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer ..	29·710 in.
Mean temperature ..	42·1°
Highest point of thermometer ..	54·2
Lowest point of thermometer ..	29·8
Mean dew-point temperature ..	37·7
General direction of wind ..	S.W.
Whole amount of rain in the week ..	0·73 in.

APPOINTMENTS FOR THE WEEK.

December 12. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

14. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

Medical Society of London, 8½ p.m. J. Baker Brown, Esq., "On the Treatment of Hypertrophy and Ulceration of the Os Uteri.

15. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

Anthropological Society of London, 8 p.m. Clement R Markham, F.R.G.S., "On Crystal Quartz-cutting Instruments of the Ancient Inhabitants of Chanduy, near Guayaquil." George E. Roberts, Esq., F.A.S.L., "On Mammalian Bones Cut by Flint Implements, from Audley End, Essex." Dr. Royston Fairbank, "On Some Flint Implements from Canada." Count Oscar Reichenbach, "On the Viability of the Negro Race in America."

Junior Medical Society of London, at Guy's Hospital, 8 p.m. Mr. Forman, "On Supra-Renal Capsular Disease."

Pathological Society, 8 p.m. Meeting.

16. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m. Middlesex, 1 p.m.; London, 2 p.m

Hunterian Society, 8 p,m. Dr. J. Braxton Hicks, "On a Case of Adherent Placenta."

17. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

Harveian Society, 8 p.m. Dr. W. Tilbury Fox, "On Porrigo."

18. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

EXPECTED OPERATIONS.

Charing-cross Hospital.—The following Operation will be performed on Saturday (to-day):—

By Mr. Canton—Tying the Axillary Artery for Subclavian Aneurism.

ORIGINAL LECTURES.

PROFESSOR HUXLEY'S LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

VII.—*The Skulls of Mammalia.*

FIG. 57.

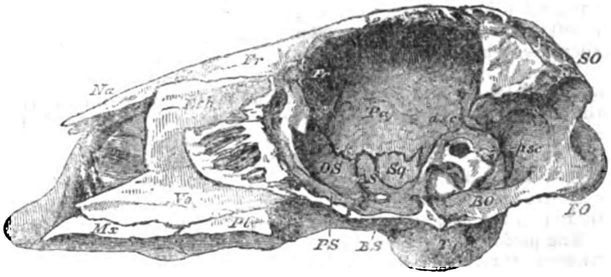

FIG. 57.—Longitudinal and vertical section of the skull of a Seal (*Phoca vitulina.*)

The skull of the Dugong (*Halicore*, Fig. 58) presents the peculiarities of the cranial conformation of Mammals of the order *Sirenia* in a very marked form. The basi-cranial axis is almost flat above, but very thick. The suture between the basi-occipital and the basisphenoid persists, but that between the basisphenoid and the presphenoid is completely obliterated, as is that between the presphenoid and the ethmoid, which last has the form of a stout bony plate, with an almost vertical posterior edge, or *crista galli*. The upper median part of the frontals is very narrow from before backwards, so that they cover not more than the posterior half of the upper edge of the ethmoid, and appear but very little on the roof of the cranial cavity; laterally and below they are much expanded, and produced forwards and outwards. The greater part of the roof of the skull is furnished by the parietals, the longest antero-posterior diameter of which bones is in the middle line, as they are not separated, posteriorly, by the supra-occipital or, anteriorly, by the frontals.

The orbito-sphenoids are large, and enter into the composition of the front wall of the skull. The alisphenoids are also large, and contribute to the formation of the side walls as well as of the base of the skull.

The squamosal appears in the interior of the cranium between the parietal, supra-occipital, and periotic, with which last it is not anchylosed.

The periotic, a large and dense ossification, has a very peculiar form, being divided into an inner portion, corresponding with the *pars petrosa*, and an outer thick mass which answers to the *tegmen tympani* and *pars mastoidea*.

The tympanic is a mere ring of bone, open above, and having a thicker anterior than posterior crus. It is by the former that it is more especially attached to the periotic, though the hinder thinner crus also becomes anchylosed with that bone.

The squamosal unites behind and below with the ex-occipital, but leaves a space superiorly in which the *pars mastoidea* appears on the exterior of the skull. The malar process of the squamosal is immensely thick, and extends far forwards as well as transversely outwards. The frontals send very large processes downwards and forwards, as in the Elephant and Tapir, which are not only met by the maxillæ, as in the latter animal, but also meet, and, indeed, are covered by the nasal processes of the premaxillæ. The lachrymals are large, but imperforate. The jugals, thick and curved, are connected with them.

The very small nasal bones are fixed by the greater part of their under surface to the anterior half of the ethmoid, beyond which they project but little, so that almost the whole of the immense anterior nasal aperture is, in the skeleton, uncovered. The premaxillæ are enormous, and constitute a large proportion of the lateral margins of the upper jaw as well as the whole of its anterior region. Their ascending or nasal processes are produced forwards instead of downwards, so that the point which corresponds with the *spina nasalis anterior* in Man is nearly on a level with the top of the head. The alveolar process is even more largely developed, to contain the incisor tusks of the animal.

The maxillæ, also large and prolonged forwards, have very thick and long palatine processes, separated by a wide incisive foramen from the premaxilla. The palatine process of the palatine is also very thick, but it is shorter than deep, so that the posterior nares, which open behind it, are placed vertically under the hinder part of the anterior nares in the dry skull. The vomer, thick and stout behind, thin and rough-like in front and above, embraces the lower edge of the ethmoid, and is suturally united to both the palatines and the maxillaries.

The skull of the *Sirenia* has resemblances on the one side with those of the ungulate Mammals and *Proboscidea*, on the other with those of the *Cetacea*, but yet differs in many and most important respects from all.

FIG. 58.

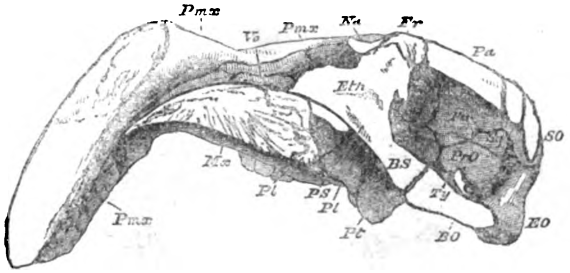

FIG. 58.—Longitudinal and vertical section of the skeleton of a Dugong (*Halicore indicus.*)

The skulls of the *Cetacea* present more singular modifications than those of any other *Mammalia*. In all, the basi-cranial axis is concave superiorly, and the primitive separation between the basisphenoid and presphenoid persists for a long time.

The vomer is very long, and extends backwards on the base of the skull at least as far as the basisphenoid, and sometimes covers the whole length of that bone.

The ethmoid has its posterior edge perpendicular, or nearly so, to the basi-cranial axis, and the foramina for the exit of the olfactory nerve are small or obliterated.

The frontals enter but very little into the roof of the skull, largely into its anterior and lateral walls. They are prolonged outwards and forwards into the long and broad supra-orbital processes, which are concave inferiorly, where they form the roof of the orbital cavity.

The parietals hardly appear at all, externally, upon the top of the skull, their median parts being obscured or interrupted by the inter-parietal and supra-occipital. They occupy a large space, however, in the temporal fossæ.

The ex-occipitals and supra-occipitals are enormous. The latter, usually increased by coalescence with the large inter-parietal, extend up to, or beyond, the vertex to meet the frontals. The orbito-sphenoid and alisphenoid vary in size. The squamosal is large, and is firmly fixed to the side of the skull, forming part of the wall of the cranial cavity. The periotic, usually anchylosed into one bone with the bullate tympanic, sometimes enters largely into the wall of the cranium, sometimes is almost altogether excluded therefrom by the parietal, alisphenoid, and other adjacent bones, which send prolongations over it.

The maxillary apparatus is greatly elongated, so as to form a kind of beak. The premaxillæ enter into the upper and inner part of the whole length of this maxillary beak, but contribute little or nothing to its palatine surface and lateral boundaries, which are formed mainly by the maxillæ. The latter bones are always prolonged over, or in front of, the supra-orbital processes of the frontals.

The nasal bones are always short, sometimes rudimentary; and the palatine bones are so disposed that the posterior nares are situated almost vertically under the anterior nares.

The squamosal bones are produced outwards, and the processes thus formed approach or come into contact with the posterior part of the supra-orbital processes of the frontals, which they separate from the jugal. Inferiorly, these processes support the glenoidal facets for the condyle of the lower jaw.

The sides of the broad basi-occipital are always prolonged downwards into free plates, which are concave outwards. These plates join the pterygoids in front, and the ex-occipitals behind, and so constitute the inner and posterior walls of an auditory chamber, the anterior and outer boundaries of which are furnished by the alisphenoid and the squamosal. In this chamber the tympano-periotic is lodged, sometimes quite loosely, at others fixed firmly in by interlocking sutures.

FIG. 59.

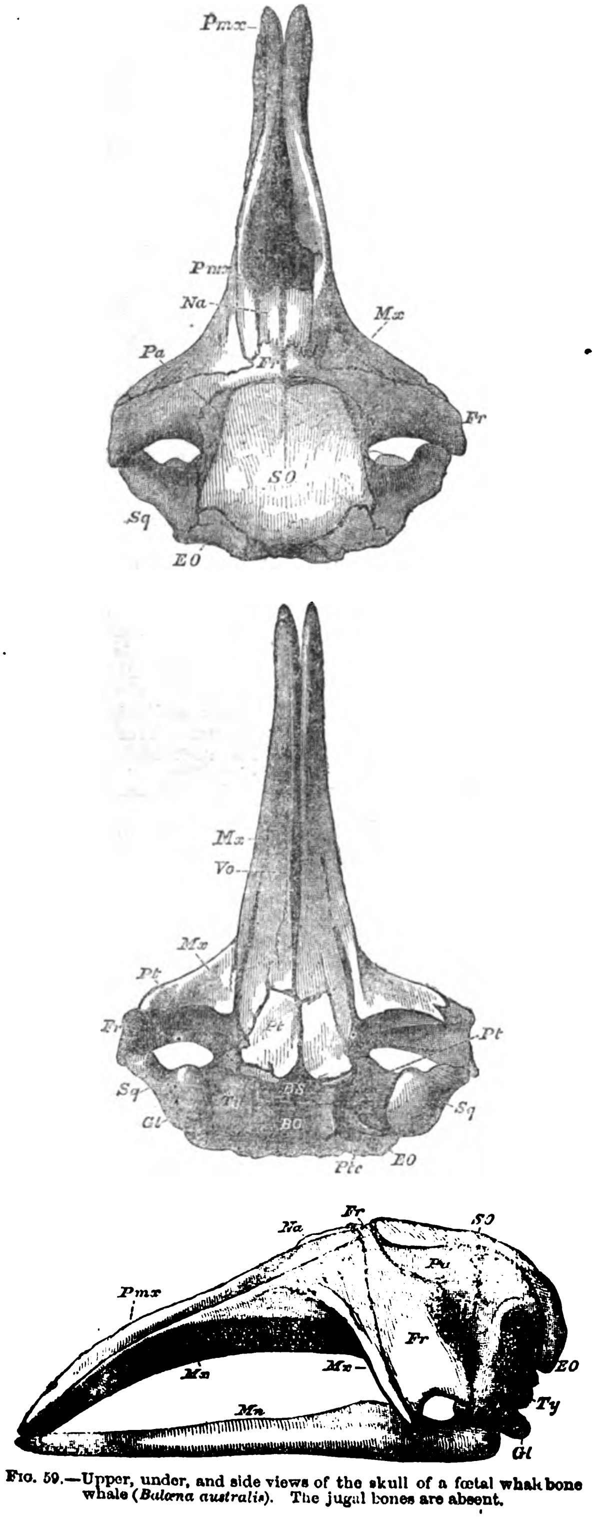

FIG. 59.—Upper, under, and side views of the skull of a fœtal whalebone whale (*Balæna australis*). The jugal bones are absent.

In the *Balænoidea*, or "whalebone whales," the symmetry of the skull is undisturbed, though there may be a slight inequality of the maxillæ. The skull of the fœtal *Balæna australis*, represented in Fig. 59, is perfectly symmetrical. Each lateral edge of the broad and flat basi-occipital is prolonged downwards and outwards into a broad process, concave outwards and convex inwards, the inferior edge of which is free, while the hinder edge unites with the ex-occipital, and the front edge with the pterygoid, to form the inner wall of the funnel-shaped chamber which lodges the tympano-periotic bone.

In front this chamber is bounded by the pterygoid and the squamosal, and between and above them, for a small space, by the alisphenoid; behind, it is constituted almost entirely by the ex-occipital, while externally and above it is bounded and roofed in by the squamosal. Between these bones there is left, at the apex of the chamber, a considerable irregular aperture, which communicates with the cranial cavity.

The anterior and outer part of the under surface of the squamosal is produced downwards into a great trihedral pillar, the obliquely truncated inferior face of which bears the articular surface for the mandible (*Gl*, Fig. 59). Behind this the squamosal presents a comparatively low wedge-shaped ridge (*a*, Fig. 60), between which and the "trihedral pillar" is a groove; while behind it, or between it and the ex-occipital, there is a deeper and wider transverse channel.

The periotic bone is irregularly triangular; the apex of the triangle, turned inwards and forwards, is thick and rounded, the anterior, posterior, and outer edges being thinner and more or less irregular. The upper smooth and concavo-convex surface of the periotic adjusts itself to the under surface of the squamosal, where it forms the roof of the funnel-shaped cavity. The apex of the periotic, however, projects beyond this, and incompletely divides the irregular aperture above-mentioned (*b*, Fig. 60) into an anterior division, which corresponds with the foramen ovale and ***foramen lacerum medium***, and a posterior which answers to a ***foramen lacerum posterius***.

The under surface of the periotic, much more irregular, is divisible into three regions: an outer anterior; an outer posterior; an internal. The first and second are separated by a deep triangular notch in the outer margin of the bone, into which the inner end of the wedge-shaped ridge of the squamosal is received. The first, broad and short (*PrO*), presents a rough surface in front, with which the tympanic articulates, and eventually anchyloses; and behind, a concave surface, which enters the roof of the tympanic cavity, answers to the *tegmen tympani*. The second, narrower, elongated, and prismatic, fits into the transverse channel behind the wedge-shaped process (*a*). It corresponds with the *pars mastoidea*, and its rough outer extremity appears on the exterior of the skull, between the squamosal and ex-occipital.

FIG. 60.

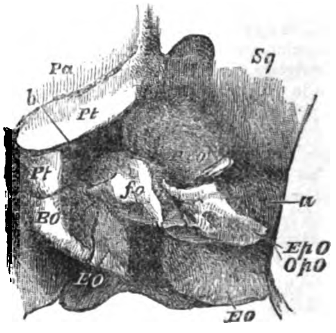

FIG. 60.—Enlarged view of the chamber which lodges the left tympano-periotic bone of the fœtal *Balæna australis*. *a*, the "wedge-shaped ridge" of the squamosal; *C*, the aperture which leads into the interior of the skull; *f.o*, *fenestra rotunda*.

The internal division, convex and rounded below, is formed by the pro-otic and opisthotic, and presents a large promontory with the *fenestra rotunda* (*f.o*) on its posterior surface, while the fenestra ovalis and Fallopian canal are visible upon its exterior. The tympanic bone (Fig. 61, *Ty*) is large, and scroll-like in form, very thick internally and below, and thin above and externally, where it presents the aperture of the external auditory meatus. It is by this thin upper and outer edge only that it eventually anchyloses with the *tegmen tympani* and *pars mastoidea*, and hence, as its substance is very dense and brittle, readily breaks off.

In the adult whale the *tegmen tympani* and *pars mastoidea* become greatly elongated and very rugged, the tympanic also acquiring a very large size (Fig. 61).

The vomer is a very long and large bone, deeply grooved above for the ethmoidal cartilage, which extends downwards and forwards between premaxillæ and maxillæ to near the anterior end of the snout. Its expanded upper and posterior end unites with the basisphenoid in the middle line, and with the pterygoid laterally. In front of the basisphenoid it embraces, not a distinct presphenoid (as in *Pterobalæna*, according to Eschricht), but the inferior surfaces of the orbito-sphenoids, which are very thick, and applied together by their flat faces in the middle line, thus apparently replacing the proper presphenoid.

Both these bones and the alisphenoids are small, and almost confined to the base of the skull.

FIG. 61.

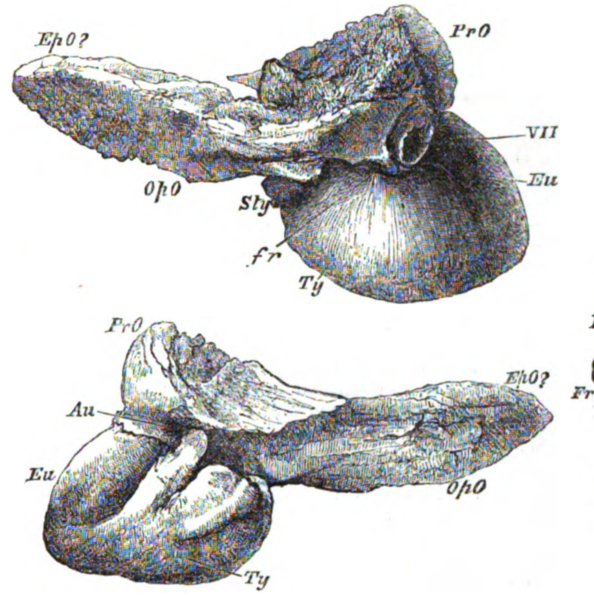

FIG. 61.—"Ear bones" of the adult *Balæna australis*. The upper figure gives the view from within; the lower, from without.

The supra-occipital and inter-parietal are united together, and completely overlap and hide the parietals in the roof of the skull. The separate frontals only enter into the anterior wall of the skull, and between them and the orbito-sphenoids an oval aperture is left, doubtless diminished in the recent state by the ethmoidal cartilage. Laterally, the frontals are prolonged outwards and backwards into two great supra-orbital processes, which nearly meet the zygomatic processes of the squamosal. The short jugal bones, absent in the specimen figured, extend in the *Balænoidea* from the zygomatic process to the anterior and external angles of the supra-orbital prolongations.

The pterygoids are completely separated by the palatines. In front of the latter the maxillæ almost wholly exclude the premaxillaries from the palate, while they send great processes obliquely outwards and backwards in front of the supra-orbital prolongations of the frontal. The long premaxillæ, on the other hand, pass upwards and backwards on each side of the elongated and symmetrical nasals to meet the frontals, and exclude the maxillæ altogether from the anterior nares.

The rami of the lower jaw are very narrow, and so much arched outwards as to be able to inclose the baleen plates attached to the upper jaw when the mouth is closed.

Eschricht has described, with much care, the changes which the skulls of the *Balænoidea* undergo in passing from the fœtal to the adult condition, justly remarking that the skull of even a large fœtus is more different from that of the adult, than the skulls of distinct species of the same genus of whales are from one another.

The growth of the walls of the cranial cavity relatively to that of the external prolongations of the cranial bones and to that of the jaws, is soon arrested, and in addition the position and relations of some of the cranial bones become altered. In the smallest fœtuses of the lesser Fin-back (*Pterobalæna minor*), for example, the parietal region was occupied by the inter-parietal bone and the great fontanelle which lies in front of it. In larger fœtuses the fontanelle becomes closed by the progressive backward growth of the frontals, but the extension of the bones does not cease with their contact. The parietals grow over the interparietal and spread over it until they meet in the middle line. Hence the inter-parietal is now visible only in the interior of the skull. Anteriorly, the parietals grow over the frontals almost to the same level as the nasals, and thus conceal the share which the frontals take in the formation of the roof of the skull. But, at the same time, the supra-occipital extends from behind over the parietals, so that, at length, in that region which, in the youngest fœtus, was covered only by the inter-parietal, three bones, the inter-parietal, parietal, and supra-occipital, are superimposed.

FIG. 62.

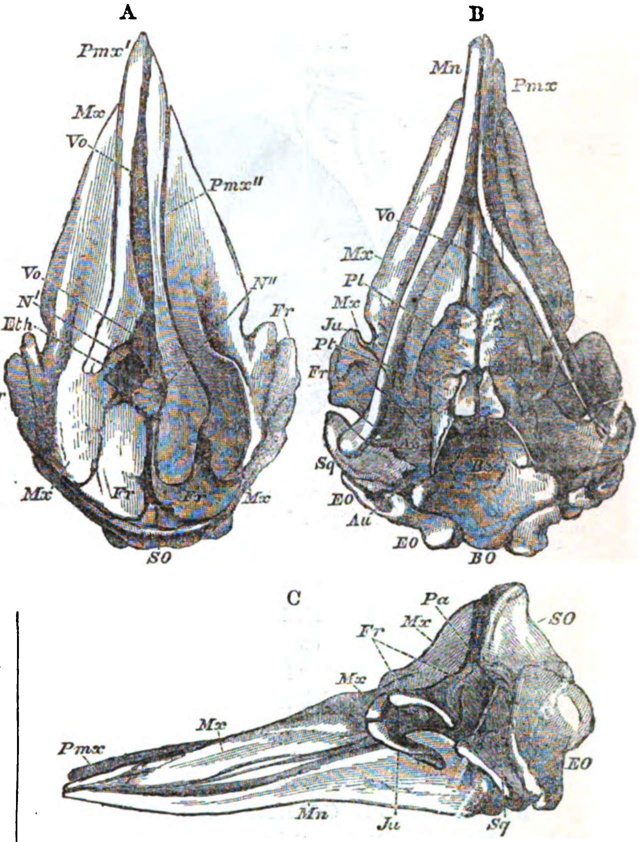

FIG. 62.—A, upper; B, under; and C, side views of the skull of a fœtal Cachalot in the Museum of the Royal College of Surgeons. The nasal bones are not represented in Fig. A. N' left, N'' right nostril. The hinder extremity of the jugal, *Ju*, has fallen down from its natural connexion with the zygomatic process of the squamosal.

The skulls of the other great division of the *Cetacea*, the *Delphinoidea*—or Dolphins, Porpoises, and Cachalots—are almost all distinguished by their very marked asymmetry.

In the Cachalot, or spermaceti whale (*Physeter*), for example, the right premaxilla is much longer than the left, extending far back upon the right frontals, while the left does not reach the left frontal; the left nostril, on the other hand, is much more spacious than the right (Fig. 62, A). On the base of the skull the pterygoid bones prolong the palate, as in *Mymecophaga* and *Ornithorhynchus*. When they and the palatine bones are removed, the axis of the lower part of the ethmoid is seen very much to prolong that of the basi-cranial bones, which are, as usual, quite symmetrical. Superiorly, however, the ethmoidal plate is twisted over to the left side, and deeply grooved on the right side to form the inner wall of the small right nostril.

The vomer, which embraces the ethmoid and the presphenoid below, is also asymmetrical posteriorly, presenting a long and shallow lateral excavation, on the left side, and a short and deep one on the right. The maxillæ are correspondingly unsymmetrical in the region of the nasal aperture, but elsewhere they are pretty nearly symmetrical. But it is the nasal bones which exhibit the greatest distortion.

The basi-occipital, as in the *Balænoidea*, gives off a lateral downward process, which unites, behind (Fig. 63), with an outward prolongation of the ex-occipital, and, in front, with the pterygoid, to constitute the inner wall of a deep chamber for the tympano-periotic. But the roof of this chamber is chiefly formed by the very large alisphenoid, which extends outwards to unite with the frontals, parietals, and squamosals, and backwards to the ex-occipitals. The aperture which is left between the hinder edge of the alisphenoid, the ex-occipital, basi-occipital, and basisphenoid is exceedingly small, so that the tympano-periotic is still more shut out from the cranial cavity than in *Balæna*. In *Hyperoodon* and *Orca* the aperture is still further reduced; but this peculiarity cannot be said to be a distinctive character of the Delphinoid skull, as in *Platanista* the aperture is large, and the periotic appears in the interior of the cranial cavity in the ordinary way.

FIG. 63.

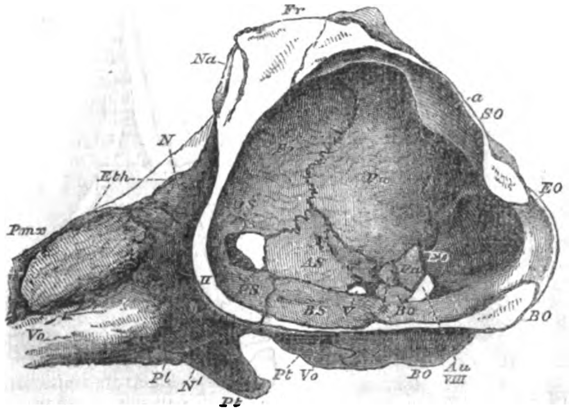

FIG. 63.—Longitudinal and vertical section of the skull of the White Whale or Beluga (*Delphinapterus*). * marks a distinct bony element interposed between the alisphenoid, the parietal, and basicranial axis; *a*, the ossified falx.

LECTURES
ON
THE BLOOD, LYMPH, AND CHYLE OF VERTEBRATA,

DELIVERED AT
The Royal College of Surgeons of England,
DURING THE SESSION OF 1863.

By GEORGE GULLIVER, F.R.S.,
Professor of Comparative Anatomy and Physiology to that College, and late Surgeon in the Royal Regiment of Horse Guards.

LECTURE VI. — *Chyle Continued — Secondary Molecules — Analogies and Homologies — Fatty Globules — Chyle-Corpuscles — Pale Cells — Red Corpuscles — Relations of Chyle, Lymph, and Blood — Coagulated Lymph — Conclusion of the Course.*

IN the last Lecture, after an account of the liquor chyli and liquor laticis, we described the molecular base of animal chyle, and of certain forms of vegetable latex. This base, wherever it occurs, was shown to be characteristic and fundamental during the perfection of those fluids, and its particles remarkable for their minuteness, faintness, and equality of size. These we described as the primary molecules of the chyle, and proceed now to a description of the other morphological elements of this fluid.

Secondary Molecules.—These are the objects which we so long since described and figured as "minute spherules or molecules," and which, with the primary ones, seem to have been included by Mr. Lane under the head of granules, in his excellent article on the Lymphatic System ("Cyclop. Anat. and Phys."). The secondary molecules, refracting the light more strongly, appear darker, are generally larger, and much more unequal in size, than the primary molecules; and, moreover, are insoluble in cold ether. The diameter of the secondary molecules is usually between $\frac{1}{20000}$th and $\frac{1}{5000}$th of an inch; their most prevailing size, in all respects like those so well seen in formative matter, being about $\frac{1}{12000}$th of an inch. Thus, their higher refracting power, comparative largeness and diversity of size, and insolubility in ether, are the chief diagnostics by which the secondary molecules may be known from the primary ones.

The secondary molecules occur throughout the lacteal system, though often sparingly, and sometimes scarcely at all, in the chyle at the commencement of the inferent lacteals; they are regularly found both in arterial and venous blood; and are as certainly also, like the primary molecules, most abundant in blood of young and rapidly-growing animals during, or immediately after, the height of digestion. As the secondary molecules increase much in quantity during the maturation of the chyle, they are far more abundant in the thoracic duct than in the peripheral lacteals. But these secondary molecules, or at least particles in no way distinguishable from them, are not formed only in the chyle; for they appear also in a variety of other fluids, as in the juice of the lymphatic glands and thymus; while the supra-renal bodies in most animals are a special laboratory of such molecules, as may be seen throughout the different classes of vertebrates. Yet there are curious exceptions, as in the Ruminant order ("Gerber's Anatomy," App., p. 104). Besides, wherever cell-genesis, molecular nutrition and growth, healthy or morbid, are most active, the abundance of these molecules will be very remarkable, formed and forming on the spot, as was shown in former lectures. They constitute, under such circumstances, the "germinal matter" of Professor Beale, and the "histogenetic molecules" of Professor Hughes Bennett. The smallest of them, when in thin fluids, exhibit the Brunonian motions; and many of the molecules, of about $\frac{1}{12000}$th of an inch in diameter, may be seen to aggregate, as if from a formative effort or process, as described by Professor Hughes Bennett, and as we have shown them in the production of the lymph-corpuscle.

The secondary molecules would appear to be of an oleo-albuminous nature, a fatty centre with a pellicle of a protein compound. This was the conclusion I arrived at from observing that they are insoluble in cold ether, that they refract the light strongly, and that they leave a greasy stain when dried at a gentle heat on paper. Dr. Davy's examinations, kindly made at my request, were to the same effect. Of the immense importance of the molecules, as germinal or histogenetic matter, no doubt can now be entertained, as mentioned in the last lecture. We have seen how their abundance is most marked whenever nutrition and formation, or generation of parts, whether healthy or morbid, are most rapidly going on. And, so long ago as 1843, I noticed the great prevalence of molecules also in disintegration of the tissues, as in a number of fatty degenerations previously unknown; in which case these molecules would be the histolytic ones of Professor Hughes Bennett. Thus, after having seen the importance of molecules in plastic matter, we perceive their retrograde and destructive agency, disorganising and dissimulative, as in the formation of tubercle, and in fatty degenerations of the arteries, lungs, testicle, etc., of which examples were described and figured, either in the App. to "Gerber's Anatomy," in the *Med. Chir. Trans.* for 1843, or in the *Edin. Med. and Surg. Journal* of the same year.

Analogies and Homologies.—We have already seen that the chyle of the roots of the lacteals of animals is the remarkable equivalent of the latex of certain vegetables, as in the orders Cichoriaceæ and Campanulaceæ, in which the liquor chyli and liquor laticis and molecular base of both are equally characteristic of the fluids of the animal and plant. Yet there are other plants abounding in a latex in which the molecular base does not exist, but is replaced by the secondary and unequal sized molecules, to which the milky colour and opacity of this kind of latex are entirely owing, as in certain Convolvulaceæ and Cynarocephaleæ. It is these vegetable molecules, passing by those of caoutchouc and starch, that afford the equivalent of the secondary molecules of the chyle. And it is curious to observe how the latex of two plants of different orders, as in the bindweed and the dandelion, or even between two different species of the same order, as in the hawkweed and thistle of the Compositæ, may entirely owe its milkiness in the bindweed and thistle to the secondary molecules, and in the dandelion and hawkweed to the primary molecules forming the molecular base. The vegetable equivalent then of the secondary molecules of animal chyle exists in the latex of certain plants, in which the primary molecules are not present in the form of a molecular base; while the latex in certain other plants, which is more or less devoid of the secondary molecules, has a true base of the primary molecules representing the molecular base of the chyle in animals; and other analogies and homologies were noticed in the last lecture. I believe there are some original and excellent observations on the vegetable juices by Schultz, of which it is to be regretted that we have neither a Latin nor English version.

Fig. 11

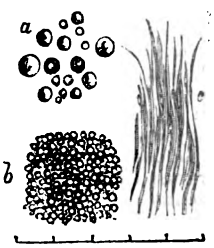

FIG. 11.—Latex of vegetables: *a*, Molecules in Convolvulaceæ, Cynarocephaleæ, etc.; *b*, Molecula Base in Papaveraceæ, Campanulaceæ, Cichoriaceæ, etc.; *c*, Fibrin of some Cichoriaceæ coagulated into fibrils.

Fatty Globules.—These occur but sparingly in the fresh chyle, and more abundantly, from a coalescence of the primary molecules, after the chyle has been kept some time in a test-tube. It has already been stated that the primary molecules of the base, when treated with water, run together into fatty globules; and these last appear regularly in pure chyle that has been some time stagnant. In perfectly fresh and flowing chyle they are less numerous, and often occur very scantily, or not at all, before the chyle has passed the mesenteric glands. But I have sometimes seen these fatty globules in chyle immediately after death, from all parts of the lacteal system of dogs and cats, and twice also as widely-diffused, within twenty-four hours after death, in the human subject. In one of these cases a young soldier died suddenly in the night, after a supper of bread, butter, cheese, and salad. I examined the body next day, and found the whole lacteal system very turgid with chyle, which presented the fatty globules in portions taken from every part, beginning with the inferent lacteals and ending with the upper part of the thoracic duct. The chyle was rich also in the molecular base, and in all the other morphological elements,—save red corpuscles, which could not be detected at all. But these I have seen in the human thoracic duct; and, as already mentioned, they were somewhat smaller than those from the blood-vessels. The fatty globules are apt to run together into rounded, but otherwise shapeless, lumps.

It is, however, in clots of chyle, particularly when kept a few days, that the fatty globules will be most remarkable and abundant, both in Carnivora and Herbivora. The fatty globules may be well seen in the chylous clot from the horse, and their size may be estimated at from $\frac{1}{10000}$th to $\frac{1}{2000}$th of an inch, with even wider extremes. From $\frac{1}{6000}$th to $\frac{1}{2666}$th is a very common size. In one trial on chyle from the thoracic duct of the soldier already mentioned, it coagulated in a watch-glass within 100 seconds, and fatty globules of about the size now indicated were observed entangled in the clot before the expiration of three other minutes.

FIG. 21.

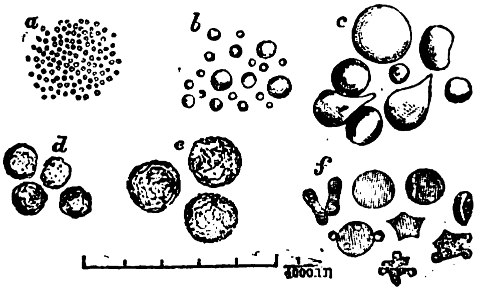

FIG. 21.—At *a*, primary molecules of chyle; *b*, secondary molecules of chyle; *c*, fatty globules; *d*, chylo-corpuscles; *e*, pale cells; *f*, red corpuscles.

Chyle-Corpuscles.—These occur regularly in the chyle throughout the whole lacteal vessels, and so are by no means confined to the chyle after it has reached or passed the mesenteric glands. The chyle-corpuscles are seldom absent, though not numerous, in the chyle of the inferent lacteals, and are still more numerous in the efferent lacteals. But it is in the chyle of the mesenteric glands that the corpuscles most abound, and to such an extent in it as to crowd the microscopic field of vision. Immediately after the passage of the chyle through the glands the corpuscles become less plentiful; and this diminution of them also continues throughout the thoracic duct, as compared with their number in the chyle of those glands.

In the human chyle, examined with an achromatic object-glass of one-eighth of an inch focal length, I made the following observations as to the comparative quantity of the common corpuscles in different parts of the lacteal system. (Fig. 22). In chyle from the inferent lacteals, either on the intestine or in the mesentery, from three to twelve corpuscles were commonly seen in one field of vision; but they were occasionally not present in a single field, so that they could not be discovered until after several shiftings of the stage. In chyle of the mesenteric glands, whether obtained from a prick of one of their lacteals or from the cut surface of the gland, the globules were remarkably abundant, though not so numerous as in the rich fluid of the thymus-body. In chyle of the efferent lacteals from ten to twenty corpuscles were regularly observed in one field of vision; that is to say, they were more numerous than in the chyle of the inferent lacteals, but very much less so than in that of the mesenteric glands. In chyle from the receptaculum and thoracic duct the number of corpuscles was much the same as in the efferent lacteals; and the corpuscles in these lacteals, just emerged from the gland, were often more plentiful than in the thoracic duct, but remarkably less so than in the gland itself. The whole lacteal system was well distended with chyle in the man on whom these observations were made. Similar results, as to the relative number of the common corpuscles, were obtained in examinations of the turgid lacteal system of the lynx, dogs, cats, the horse, and ox. These corpuscles may be seen in the blood; and I have observed them in that of small branches of the mesenteric vein.

FIG. 22.

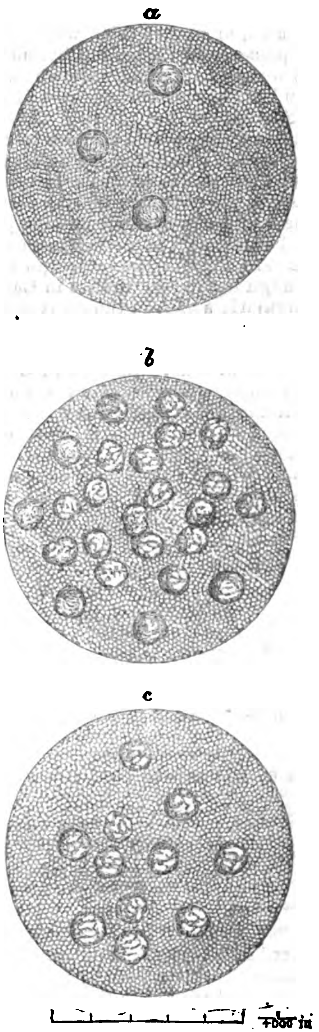

FIG. 22.—Molecular Base and Corpuscles of Chyle. At *a*, from a lacteal on the intestine; *b*, from a mesenteric gland; *c*, from the receptaculum chyli. From a man.

As to the size and relations of the chyle-corpuscles, they have an average diameter of $\frac{1}{4670}$th of an inch, the characters of free nuclei, and, in short, are not distinguishable in any physical or chemical character from the corresponding objects in lymph and in the fluid of the thymus-gland. Two, three, or more of them may be sometimes seen inclosed within a common cell, an endogenous brood (Fig. 18, *d*, Lecture IV.), in the juice of that gland and of the mesenteric and lymphatic glands.

During digestion, as we have just mentioned, the fluid of the mesenteric glands is pervaded by the molecular base; and at that time is richer in the corpuscles than chyle taken from any other part of the lacteal system, so that their number, as in the peripheral absorbent glands, far exceeds that in the chyle or lymph of the efferent vessels and thoracic duct or receptaculum chyli. After prolonged fasting the molecular base entirely disappears, and though the number of corpuscles in the juice of the mesenteric glands is diminished, it is still in excess of the same corpuscles in the efferent vessels, and becomes similar to that of the lymphatic glands, to wit, semi-transparent and of a light brown colour; for the many corpuscles which the juice still contains are not sufficiently abundant to make it opaque or creamy, as they do the rich fluid of the thymus in young thriving animals.

Though the chyle-corpuscles of Apyrenæmata and Birds, like the majority of the regular corpuscles in the juice of the lymphatic glands and thymus, are truly nuclei, the nucleus while free differs in some respects from that existing within the red corpuscle of Pyrenæmata, and from the nucleus of the pale cell of the blood in the whole vertebrate sub-kingdom. The nucleus of the red corpuscle of many Pyrenæmata is regularly oval, and, indeed, sometimes a narrower ellipse than the entire red cell, while the free lymph corpuscle is as regularly of a circular shape, both in Apyrenæmata and Birds. Besides, the nucleus of the red corpuscle of Pyrenæmata, whether exposed in recent blood by acids, or in dry blood by the moisture of the breath, may be quickly dried, and the form of the nucleus thus preserved for an indefinite time on the object plate; whereas the free nucleus or lymph-corpuscle, when thus treated, or even if dried without any such treatment, will not so preserve its shape, but becomes faint or deformed. And, as we have repeatedly shown, while strong acetic acid only renders the free nucleus as well as the nucleus of the red cell more distinct, not altering the form of either, the same acid causes a remarkable division of the nucleus of the pale cell. But, while describing the differences between the free nucleus and the nucleus within a cell, we must not forget that the general resemblance in size and all other respects of both the corpuscles of chyle and lymph, throughout Apyrenæmata and Birds, affords a remarkable contrast to the differences in size and form of the red corpuscles of these animals. Thus, though the red corpuscles in Camelidæ are oval, in Moschus singularly small, in the great Ant-eater very large, the lymph corpuscles differ but slightly in these animals, and indeed might be confounded in every respect with the lymph-corpuscles of man. In birds, too, notwithstanding their larger red corpuscles, the lymph corpuscles are regularly as small, if not rather smaller, than the corresponding objects in the human subject. And all these observations as to the general resemblance of the lymph-corpuscles in different classes apply as well to the pale cells of the blood, so that it might be difficult, if not impossible, to distinguish any difference between these pale cells of Moschus and those of a bird, in spite of the immense difference in the size of their red corpuscles.

Fig. 6.

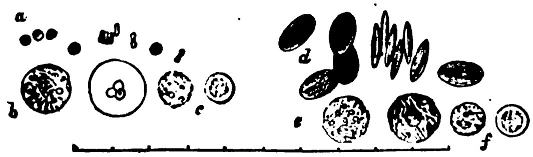

FIG. 6.—Red corpuscles and pale globules of the blood, and lymph corpuscles of *Moschus Meminna* and *Camelus Vicugna*. At *a*, red corpuscles lying flat, in rolls, and on edge, of *Moschus*; *b*, an unaltered pale cell of blood, and the same with a triple nucleus exposed by the action of acetic acid; *c*, first, a lymph-corpuscle unchanged, and, lastly, the same treated with strong acetic acid. At *d*, red corpuscles of *Vicugna*; *e*, two pale unchanged globules of the blood; *f*, two lymph-corpuscles, the first fresh, and the last after having been steeped for hours in strong acetic acid.

Pale Cells.—These occur in the efferent lacteals, thoracic duct, and receptaculum chyli, and sometimes in the lymphatic glands, but are by no means so plentiful in any part of the lacteal system as the common corpuscles or nuclei. The average diameter of the pale cell is about $\frac{1}{2800}$th of an inch. It is not distinguishable either in form, size, or structure from the pale cell of the blood, and, like the last, exhibits a single or multiple nucleus when treated with acetic acid. Sometimes the cell will even alter its shape, as described of the pale cell of the blood. Nothing, therefore, can be more plain than the difference between the pale cells and the corpuscles of lymph or chyle. These last are nuclei, and have not a single character by which they could fairly be confounded with the pale cells either of chyle or blood.

Red Corpuscles.—Monro, as early as 1785 ("On the Anat. and Phys. of Fishes," p. 37), after opening the bodies of living animals, and some time thereafter the upper end of the thoracic duct, found red corpuscles mixed with the contents of that vessel; but he thought the appearance was caused by the absorption of corpuscles which had been extravasated in consequence of inflammation. Schmitz, Gurlt, Schultz, and Valentin have all since seen red corpuscles in the chyle; and Gerber described them as increasing continually in the thoracic duct of the horse, by a conversion of lymph-corpuscles, in their progress towards, and course through, that duct to its termination. But the best account of the rosy colour of the chyle in the thoracic duct of the horse was given by Mr. Lane, in 1839, when he proved that tint to be due to the presence of red blood corpuscles. And this proof was confirmed by many physiologists soon afterwards, and by myself about the same time. Red corpuscles are now known to occur regularly in the thoracic duct of the horse, and they are common in the ox; but their presence has often been supposed to be a post-mortem effect, or at least due to extravasation,—an opinion which is questionable, as will be presently explained. The red corpuscles appear far less plentifully in the chyle of Man and of the Carnivora. Yet I have more than once detected a few red corpuscles even in the peripheral lacteals of dogs, and very often in their thoracic duct, and sometimes in the central lacteals. But in all these cases the red corpuscles were so few in number as to contrast remarkably in this respect with those in the thoracic duct of the ox and horse. It should be borne in mind that we are speaking of the corpuscles of the chyle when the lacteal system is turgid with that fluid. After fasting, when the fluid of the thoracic duct of Man or Carnivora is so dilute or scanty that the characteristic molecular base of the chyle is no longer recognisable, red corpuscles occur more plentifully, and the contents of the receptaculum may even present a slight ruddy brown colour, from the presence of these corpuscles, a fact of which we have already treated. The presence of red corpuscles in the thoracic duct is a phenomenon perfectly in accordance with the observations of Hewson on the lymphatic system. He always so emphatically described the lymph-corpuscles as central particles, ready to become coloured and transformed into the red corpuscles of blood, as we have before noticed more particularly.

Fig. 5

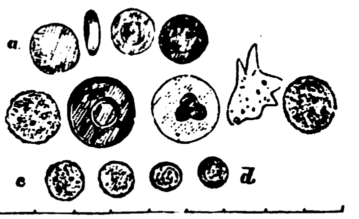

FIG. 5.—Red corpuscles and pale cells of blood, and lymph-corpuscles. At *a*, four red corpuscles; *b*, five pale cells; *c*, *d*, four lymph-corpuscles. The first pale cell, at *b*, contains spherical molecules, the last is only minutely granular, and the fourth is collapsed and sending off processes; these three cells are in the natural state, but the second shows its circular nucleus exposed by the action of weak acetic acid, and the third the nucleus divided after treatment by stronger acid. Of the lymph-corpuscles (which are from an inguinal gland) at *c*, the first two are in their natural state; and at *d*, the last two, after having been long steeped in strong acetic acid. From a child, aged 3, accidentally killed.

I have repeatedly compared these red corpuscles from the chyle of the thoracic duct of the horse with the red corpuscles of the same animal's blood taken from the heart, arteries, and veins. A difference both in size and form was constant and well proved Thus the red corpuscles from the thoracic duct were found to have an average diameter of $\frac{1}{5800}$th of an inch, while the red corpuscles from the heart and blood-vessels gave an average measurement of $\frac{1}{4600}$th of an inch. In the dog, the mean size of the red corpuscles from the lacteals was $\frac{1}{5333}$rd, and of red corpuscles from the blood-vessels $\frac{1}{3542}$nd of an inch. Similar results were obtained from the human subject; consequently, as regards size, the red corpuscles occuring in chyle are about a third smaller than the regular red corpuscles of the blood; a difference of form is also as remarkable, for while the indented and granulated corpuscles, often with molecules at their edges, occur only in a small minority of the red corpuscles of the blood, these forms constitute the majority of the red corpuscles of the chyle. And it was ascertained, as the result of repeated trials, that the red corpuscles of blood, when artificially mixed with chyle, preserve their regular shape.

Hence it is fair to conclude that the red corpuscles found in the chyle are by no means owing to those corpuscles having got into that fluid accidentally from the blood-vessels. Moreover, however numerous the red corpuscles may be in the thoracic duct, they are not so prone to run together into rolls as those of blood, not even when the fluid of the chyle is artificially thickened. The red corpuscles of chyle, therefore, have not yet fully acquired that remarkable property of becoming viscid with the increasing viscidity of their surrounding medium; moreover, the red corpuscles of chyle are not distinguishable from the red corpuscles of lymph.

Relations of Chyle, Lymph, and Blood.—Here, then, we arrive at the conclusion that the chyle, lymph, and blood differ rather in the proportion than kind of their respective morphological constituents. In the higher vertebrates there is no corpuscle in any one of these fluids that does not occur in the others. The lymph corpuscles are more abundant in lymph and chyle than in the blood, and the pale cells are about as numerous in the lymph and chyle of the thoracic duct as in the blood. But, as the preponderance of red corpuscles is the leading character of the blood, so is the preponderance of the molecular base the fundamental characteristic of the chyle—a fact now fully established, though so tardily admitted after the demonstration of it in 1840 (*Dublin Med. Press*, Jan. 1, and App. to "Gerber's Anat."), previous to which the chyle-corpuscles were always considered as the cause of the whiteness of the chyle. Indeed, as so long since proved, to the molecular base alone the chyle owes its most perfect whiteness; and the colour of the latex of certain plants is also entirely due to an equivalent base. We have seen that, though the pale cells of blood and lymph-corpuscles have been commonly confounded, they are so different that the one is a cell and the other a nucleus. And as for the corpuscles in the juice of the lymphatic glands and thymus, and in the chyle of the mesenteric glands and lacteal vessels, they have been shown as absolutely identical, or at least we have proved that their physical and chemical properties are so, while there is a difference of form and size between the red corpuscles of blood and the red corpuscles occurring in chyle or lymph. The molecular base of the chyle, though not yet recognised in our books or systematic treatises as a regular constituent of the blood during digestion ("Gerber's Anat," App., pp. 21 and 90), certainly is so, and may be always found accordingly, if properly looked for, in the blood both of the arteries and veins; and this fact, besides its physiological importance, should not be lost sight of in pathology, because this chylous blood has been confounded with a milk-like blood occurring in disease. Though we have before shown that, under certain circumstances, molecules, pale cells, and red corpuscles may be generated within the blood or on the spot, the evidence we have adduced seems to be conclusive that all the morphological elements of the blood may be derived from without, not one of them being necessarily formed within the blood, however developed or perfected there; for we cannot reject the weight of testimony that the lymphatic and lacteal system can convey to the blood the fluids and the different solid organic forms which we have described in the preceding lectures.

Coagulated Lymph.—And, as for the coagulated lymph of Jean Senac, Martin Butt, and John Hunter, now often called plasma, or blastema, we have shown, after the discovery of Dr. Buchanan, that it can be produced by mere contact either of two varieties of serum, or by the addition to one of those liquids of various cells or other soft organic substances, or even by hard, dry, and powdered fibrin. It is also a fair inference from my own observations, that the resulting clot may be a parturient matrix—a procreant cradle—of plastic matter. I have also clearly shown that the coagulum—this protoplast—in the serum may immediately assume the form of a membranous sac, having lacunæ within and an intimate texture of fibrils throughout; all this, moreover, so surely neither essentially due to the agency of cells, nor of foreign matter, nor to the abstraction or emission of ammonia, that the sum of the facts amounts to a central and comprehensive truth, the proximate efficient of primordial organisation before the cell doctrine can be at all applicable either to the process or phenomenon.

Conclusion of the Course.—Finally, we cannot dismiss the subject of the blood, lymph, and chyle without reverting to the excellence of British researches in this fundamental department of animated nature. While cordially acknowledging our obligations to such admirable foreign observers as Malpighi and Borelli, Petit and Senac, we may regard with just pride the pre-eminent native services of Harvey, Hewson, Hunter, and others. And the more so, when we perceive how (*Medical Times and Gazette*, Oct. 25, 1862, Jan. 31, Oct. 31, Nov. 14, and Hunterian Oration, 1863), with the sorry aid of British patronage, the recent German School is attempting, though profiting so largely by their labours, to conceal or contemn the very names of one or more of our illustrious countrymen,—names which we have truly proved to be entitled to the most honourable place in this chapter of physiological history. Hence, for the sake of truth and justice—in the face, too, of those ignoble aggressions, and of such minds as may choose to ignore the Creator in the creation—we must repeat that to Harvey belongs the first scientific demonstration of the life of the blood; to Hewson the discovery of the leading office of the lymphatic system, of the formation of and endosmotic force belonging to a nucleated cell, and of the form and structure of the red corpuscle of that fluid; and to Hunter the beautiful and profound revelation of the vital endowments of the coagulable lymph.

ORIGINAL COMMUNICATIONS.

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CASES OF EPILEPSY, CONVULSIONS, GIDDINESS, ETC.

PART OF A SERIES ILLUSTRATING AFFECTIONS OF THE NERVOUS SYSTEM, OF ORGANIC AND INORGANIC ORIGIN, WITH CLINICAL AND PATHOLOGICAL OBSERVATIONS.

By JOHN W. OGLE, M.D., F.R.C.P.,
Assistant-Physician to, and Lecturer on Medical Pathology at, St. George's Hospital.

(Continued from p. 510.)

Case 67.—Elias B., aged 14 years, a delicate, red-haired boy, with feeble but regular pulse, had for five months been subject to headache and to fits in which he lost consciousness and struggled greatly, and bit his own hands as well as the clothes about him, as his mother said, "shaking the pillow like a dog." There was no biting of the tongue and no foaming. The first fit was apparently the result of intense fright; the attacks were always preceded by headache, lasting one or two hours, and came on at variable times, often daily, but never with a longer interval than two weeks.

The tongue was clean, and the muscles of the extremities and of the face, and the pupils of the eyes, etc., were unaffected.

Ordered the syrup of iodide of iron three times a day, and an occasional emetic whenever he anticipated an attack.

At the end of one week he had taken the emetic once, but no fit had occurred. At the end of another week there had been a fit, caused, it was thought, by fright.

He went on appearing at the Hospital at intervals of one and two weeks for three full months, persevering in the medicines, and not a single return of the fits occurred; he, however, had attacks of headache for some time after the last fit.

He was then discharged.

Case 68.—Emma C., aged 18 years, of healthy family, for a year had been subject to giddiness and occasional headaches, and latterly to transient attacks, in which she lost consciousness for a short period, and stumbled if she was walking. The catamenia were very scanty.

Ordered quinine and iron, and valerian and chloric ether, with occasional compound colocynth pill.

This was continued with for five weeks, during which time she gradually recovered, losing all the symptoms, and was discharged as feeling quite herself.

Case 69.—Eliza W., aged 14 days, whose mother was very delicate, for six days had had fits continuously, night and morning, about every fifteen or twenty minutes. During the attacks there was constant twitching of the muscles of the face and of the eyes. The bowels were confined. Was not nursed by the mother directly, but was fed with the mother's milk by means of a spoon. Ordered that the mother should take a bath three times a-day and better nourishment, and that the infant should have twenty drops of castor-oil from time to time, and in addition to her mother's milk cream and water.

In a few days the fits diminished in frequency, in a fortnight they had quite ceased, and, as after the lapse of two more weeks they had not returned, the mother and child were dismissed as out-patients.

Case 70.—Harriet R., a delicate-looking child, aged 14 months. Had been subject to epileptic attacks ever since she was three months old (following in the first place a feverish attack), which had become more frequent after an attack of bronchitis one month previous to being seen. She was said to be "teething," but only one tooth (lower front one) had appeared. She had lost flesh. There was convergent strabismus of the left eye, which, it was said, she had had since her second convulsive attack. The child was one of eight children, of whom another only had ever had "fits," and that was whilst "cutting an eye-tooth." No worms were known to exist. The convulsive attacks generally happened daily, and very often several in the day. Four had occurred on the day before admission at the Hospital, and one on the day of admission. Ordered the cod-liver oil and steel wine thrice a-day, and the compound jalap powder on the morning after being first seen.

At the end of one week it was reported that after the powder the bowels had been open four times, but no worms had passed. On the day when seen previously there had been four fits, and then four days passed without their recurrence. One fit then occurred, and none since. When seen she was, however, dull and heavy. Another tooth had been cut. Medicine continued. At the end of another week only one fit was reported as having occurred, and no intestinal worms had been passed. Another jalap powder was ordered. Two weeks then passed without any fits whatever, but at the end of a third week it was reported that one fit had taken place, and that the sleep which followed it was disturbed by slight convulsive movements of the limbs. After this the bowels had become relaxed, and so continued. Medicine was directed towards the diarrhœa, and this had to be continued for two weeks, at the end of which time no fits had occurred, but it was said that she had often awakened up from sleep with a start, and "tearing about." There was also an in-drawing of the thumbs of both hands into the palms, and the nails of the fingers had also begun to die and to be "shed off," having a peculiar dark line across them. During this time she was continuing the oil and steel. At the end of another week she was reported as having "much improved," but still started and screamed in sleep, but not at all in the day time. There had been no fits, and the thumbs of the hands were not spasmodically affected. The evacuations were almost natural. Two more weeks passed with the occurrence of only one fit, and that in the night time. The gums of two teeth were very full and prominent, and the mother said the eye would often "turn up." After this I lost sight of the patient.

Case 71.—James R., aged 43 years, had been a publican, but asserted that he had drunk but little, though he always felt "tipsy" after a single glass of ale. Four years previously he had an attack of epilepsy, the cause of which was unknown. No return until a month before application at the Hospital, but in that time he had three attacks. These generally appeared to follow the use of indigestible food or anxiety of mind. The fits began by loss of sight with the left eye, and in them he bit his cheeks and foamed much. He was daily subject to "heaviness and giddiness," and often was nauseated, but not to vomiting. The muscles of the limbs and face were unaffected in any way, and the pupils of the eyes, though sluggish, were natural.

Ordered an emetic twice a-week, and rhubarb, magnesia, and bicarbonate of soda twice a-day. Subsequently he took the decoction of bark and bismuth, with calumba, with the emetic occasionally.

Under this treatment no fits occurred for three months.

Case 72.—Alexander F., aged 35, delicate-looking, with enlarged cervical glands in the neck. Had been subject for two years to "fits," which generally came on from between 12 and 1 a.m., and very seldom during the night. In the attacks, which came on without warning, the tongue was not always bitten, but at times the lips and cheeks were bitten; they lasted about a quarter of an hour, and during their occurrence the consciousness was entirely lost.

A rather peculiar prominence of the skull at the anterior and posterior portions of the vertex existed, otherwise nothing was noticeable as regards the appearance, features, etc., of the patient. No history of any known cause for the attacks could be traced, and the immediate cause could not be ascertained.

Ordered quinine and iron, with senna aperients. Subsequently, syrup of iodide of iron, calumba, etc., and afterwards cod-liver oil. The patient was under treatment for eight and a-half months, the attacks becoming much less numerous. At one time he passed a whole month without any fit, and three months were at one time passed without the tongue having been bitten. Once he fell down in an attack, and cut his forehead.

I eventually lost sight of the patient, owing to his having to go to Scotland.

Case 73.—Henry C., aged 49, a healthy-looking, temperate man, with good family history, had received a blow on the head from the fall of a heavy chest twenty years previously, but had experienced no harm in consequence after the immediate effects of the accident were removed. Four weeks before his application at the Hospital he had an epileptic attack, which occurred in the day time, in which he lost consciousness and bit the tongue. This was preceded by headache. He had a second attack one week before his application, which occurred during the night, but whilst he was awake.

He was complaining of pain in the limbs and in the scalp. The pulse was weak and the tongue and lips pale. The urine was free from albumen.

Ordered a blister to the nape of the neck and the tincture of bark. Subsequently he took the syrup of iodide of iron with iodide of potassium and infusion of quassia. For seven weeks this treatment was continued, and no recurrence of the attacks took place. The patient then ceased to attend.

Case 74.—Martha R., aged 38, healthy-looking, and of healthy family, had been subject to "fits" for sixteen years. They had no apparent cause, and had been more frequent of late; they always occurred in the day time, and for the most part before or after breakfast, and lasted from twenty to thirty minutes, during which time consciousness ceased and the tongue was bitten. The attacks were almost always preceded by giddiness and "jumpings" of both legs, lasting for two or three days, and were generally followed by pain at the top of the head, and vomiting, and then by sleep.

There was no affection of the arms or legs, and the muscles of the face, eye, etc., as well as the special senses, were unaffected in the intervals of the attacks.

The catamenia were irregular, but no connection could be traced between them and the attacks.

The pulse feeble, regular. Bowels regular. Urine natural. Ordered extr. belladonnæ, gr. ½, om. n., and Syr. ferri iod., b. d., with occasional emetics. The patient continued for three weeks under treatment, and no fits occurred; she then ceased to attend.

Case 75.—Thos. M., aged 55 years, a blacksmith, complaining of constipation, had been latterly the subject of giddiness, and this to such a degree that he had fallen down to the ground in a partially unconscious condition three or four times; these attacks had been followed by a "trembling of the hands." He had also much complained of an aching of all the limbs, and of being "tired to death" constantly. The pulse was regular but feeble, the urine free from albumen, but loaded with lithates, and no actual disease of any organ was traceable. There was marked arcus senilis of the corneæ of both eyes.

Ordered a draught with rhubarb and magnesia every night, and quinine with the sp. æth. nitric. three times a day; this was continued for three weeks, and he was then discharged as being in all respects well.

Case 76.—Thomas T., aged 39, healthy-looking and of healthy family, had been suffering for one year and a-half, at various times, with "queerness," odd feelings, and giddiness, ever since an attack which came on suddenly, in which there was much "pinching of the bowels," a peculiar sensation "passing up to the head, as if he was in the middle of a lot of sulphur," and an imperfect loss of consciousness. The urine was natural, and the various organs of the body betrayed no positive traces of disease.

Under the use of the mist. gentian comp. and chloric ether, and also the occasional use of the comp. rhubarb and blue pill, followed by calumba and bicarb. of potash he quite recovered in the course of a month, and was discharged perfectly free from any of his symptoms.

Case 77.—Ellen W., aged 22 years, healthy-looking. Had been for two or three months subject to convulsive attacks, which, from the description given, appeared to be partly epileptic and partly hysterical. The catamenia were very scanty and very painful, and the attacks were always worse at those periods.

Ordered the comp. decoction of aloes and nitrate of potash three times a-day.

After about ten days the catamenia came on, and passed off without pain or discomfort, and the attacks were much easier; gradually they subsided, and at the end of a month she was discharged at her own request, as being "all but well."

Case 78.—Caroline Y., aged 22 years, a housemaid, for three years had been subject to epileptic attacks, which generally came on at catamenial periods, but latterly had occurred more frequently, even two or three times a month. The first attack was experienced whilst the catamenia were present, exactly one month after she had been much frightened and bitten by a dog at the catamenial period, owing to which she fainted away. The attacks came on indifferently, day and night, and were never preceded by any sort of warning.

Ordered the bromide of potassium in five-grain doses, and syrup of iodide of iron in water three times a-day, and aperients every other day.

At the end of two weeks there had been one very severe fit, which had been followed by pains across the loins and neck.

At the end of two more weeks there had been no fits, and the catamenia had been abundantly present. One week more passed without a fit. At the end of another a single fit had occurred, and at the end of another one another slight attack.

In the three following weeks there was a fit in each one. Extract of belladonna was now given night and morning along with quinine and iron. At the end of another week it was reported that the catamenia had appeared, preceded, on the day before, by several fits.

Another month passed, during which two slight attacks occurred, the last one just before menstruation, and iron, sulphate of zinc, and magnesia were given.

In each of the next four weeks a single fit occurred. I then lost sight of the patient.

Case 79.—Frances B., aged 16, of delicate aspect, but healthy family, had been subject to "fits" for two years and a-quarter following an attack of "low fever." The attacks lasted about twenty minutes, and were preceded only by occasional twitching of the hands; the whole of the left side was affected by spasm during the attacks, which were attended by entire unconsciousness.

The pulse was feeble; the catamenia generally very scanty, and attended by much pain in the abdomen, and their appearance was generally preceded by a fit of some intensity. Formerly the attacks appeared sometimes only once in three months. Before her application to the Hospital they had come on sometimes twice a-day. In the eight days before her application there had been two attacks.

Ordered the warm hip-bath every other night; the occasional use of the compound rhubarb pill and the mist. ferri comp., with iodide of potassium three times a-day.

At the end of two weeks' continuance of treatment she reported that she had had no regular attacks, but had had twitchings in both hands, and symptoms of "going off," without having done so. At the end of two more weeks there had been two fits, and following them the catamenia had appeared. Subsequently, she at times took the aloes and myrrh pill, continuing the medicine. At the end of two more weeks there had been four regular attacks, and the catamenia again appeared. At the end of two more weeks there had been no fits. At the end of another one, one was reported, and the catamenia had again come on, with much less pain and discomfort than on previous occasions. I then lost sight of this patient.

Case 80.—Charlotte K., aged 24, of tolerably good health, but subject to epistaxis. Had a "low fever" about three years before, and then became subject to epileptic attacks, which came on every three or four weeks, and were always much aggravated at catamenial periods, which were tolerably regular in their appearance. At the first attack, which occurred whilst at dinner, she bit her tongue, and foamed at the mouth, and fell out of the chair unconscious. She had three attacks on the same day. The attacks since the first one had not been attended by a biting of the tongue, etc. No warning of the attacks were experienced, which began by the face becoming exceedingly red, and by pain in the back and chest, and were followed by flatulence, lasting some days. The patient was reported as being generally depressed and constipated. The cardiac sounds were natural, and no albumen existed in the urine. The pulse was feeble; regular.

Ordered the syrup of iodide of iron and iodide of potassium twice a-day, and the aloes and myrrh pill every other night.

On the tenth day afterwards a fit occurred, without any warning, which lasted five minutes, and was followed by sighing and drowsiness, and a sensation of cold.

At the end of another fortnight one more fit had occurred. Ordered the citrate of quinine and iron, with chloric ether and infusion of valerian. At the end of another ten days there had been no fit. At the end of another fortnight one slight attack had occurred, and on the day when seen two attacks took place.

Another fortnight passed without a fit, the medicine being continued. The patient then left London.

Case 81.—Helen McB., aged 23, of delicate appearance, and liable to headache and palpitation of the heart, had been subject to epileptic attacks, with loss of consciousness, for five months. Three attacks had occurred, the last one about a week before she was seen by me. The first one lasted an hour and a-half, the last one only a few minutes. No warning preceded the attacks, which were unattended by biting of the tongue. The catamenia were very irregular, at unusually distant intervals, and very scanty. The legs were complained of as liable to swell. There was no albumen in the urine; no intestinal worms known to exist.

Ordered ammonia, steel, and valerian, with the aloes and myrrh pill every other night.

At the end of two weeks no regular attacks had occurred, but certain symptoms had been complained of, such as occasional inability to articulate, and "forgetfulness of words."

At the end of two more weeks there had been no positive attacks, but slight and transient loss of consciousness, with numbness of the hands, and headache. At the end of another week there had been still no fit, but certain "feelings as if going off,"—a kind of syncopal attack, doubtless. Another week, and no fit. At the end of another week one fit had occurred, and numbers of ascarides were noticed in the fæces. Ordered calomel and compound jalap powder, and to continue with the remedies.

At the end of another week she had had no fit, but complained much of the "fidgets;" but worms had been passed in abundance.

Treatment was continued for five weeks longer, during which no fits recurred. She, however, at times felt what she termed "very curious sensations."

I then lost sight of the patient.

(To be continued.)

ON A PLAN OF TREATING PROLAPSE OF THE FUNIS,

FIRST SUGGESTED AND CARRIED OUT BY SIR RICHARD CROFT.

By J. LUMLEY EARLE, M.D.,
Obstetric Surgeon to the Queen's Hospital, Birmingham.

PROLAPSE of the cord during labour is an accident attended with such a frightful mortality to the infant that I feel it my duty, without further delay, to lay before the Profession the following brief remarks upon a method of treatment which I believe to be the one most likely to save the largest number of children. Out of 565 cases of prolapsus collected in a statistical table by Dr. Churchill, 297 children were lost, or more than one half.

Of all the plans recommended for the treatment of prolapsus funis, it is said that of turning has saved the greatest number of children, and I shall therefore presently compare together the respective merits of turning, and Sir Richard Croft's method, to show how far more likely is his plan to lessen the number of still-births in such cases than is the operation of turning; but, before doing so, it would not be right to leave unmentioned the objections attached to other modes of treating prolapsus funis.

To such methods as pushing the cord above the brim with the fingers, or with instruments, or lodging the cord in the hollow of the neck of the child, there is the objection that the cord, which, when prolapsed, is generally unusually long, is very liable to slip down again at the next uterine contraction. To mechanical means for pushing the cord above the brim, besides the objection already mentioned, there are two others; one is that a Medical man cannot be expected to carry about to every labour an instrument intended to remedy an accident which only occurs about once in 221 cases. The whalebone instrument recommended by Dr. Ramsbotham can certainly be made on the spot; but then it has the other objection attached to it, which is, that in order to place a fold of the cord in the loop of the tape, the cord has to be pulled down outside the vulva; this proceeding alone would place the life of the child in a certain amount of jeopardy, and further, by pulling down more of the cord, there would be less chance of its remaining up after being replaced. The plan suggested of placing the cord in a part of the pelvis where it would be the least subject to pressure is all very well in theory, but I should be very sorry to trust to it in practice. It might in some cases succeed where the pelvis was unusually capacious, and the birth premature. The forceps would only be required in those cases where the head was low down in the pelvis, or, at all events, had entered the brim, and of necessity, if the prolapsus has not been remedied before the head has come down so low, the life of the child would be in the greatest of danger, if not lost already.

The operation of turning for prolapsus of the cord (if we only consider it for a moment) is a most unscientific mode of treating that complication. In order to save the child's life, we undertake a treatment, which of itself is but a few degrees less dangerous to the infant. According to Dr. Churchill's statistical tables, the mortality in footling cases is 1 in 2¼. On the other hand, Sir R. Croft's method does not alter the natural head presentation, which is the only safe one to the child, but merely replaces the cord in its proper position. His method consists in passing the cord up to the fundus of the uterus enclosed in the hand, and hooking it over the highest portion of the fœtus. In his treatment we do the first step towards turning, that is to say, we pass our hand up to the fundus, but instead of pulling the feet down, we merely hook or place the cord over the highest portion of the fœtus, and then, when an uterine contraction comes on, gradually withdraw our hand. What mode of treating such cases can be more according to nature?

Dr. Churchill, in speaking of this plan, states that it is a very difficult and somewhat dangerous operation, and that he is inclined to agree with Dr. Burns, that "if the hand is to be introduced so far, it is better at once to turn the child." All I can say is, that in the three cases in which I employed this method, I found it a very simple operation, and as to its being better to go on and turn the child when the hand has been passed so far, I have stated the very important reason why it would not be better to resort to turning, as it is in itself a remedy of great danger to the child.

Of course, Sir R. Croft's method would not be practicable in every case more than any one of the other remedies recommended; but in any case in which we could turn we could also employ his plan of treatment. The great point in prolapsus funis is not to rupture the membranes, if possible, until the os is nearly fully dilated, and not to leave the room after the prolapse is discovered, for in our absence the membranes might rupture, and the opportunity for applying proper treatment be entirely lost.

I here subjoin a table of seven cases of prolapsed cord which have come under my own observation, with the methods employed, and the result to the infants.

Methods of Treatment.	Number of cases.	Result to child.	
		Alive.	Dead.
Pushed the cord above the brim . . .	2	1	1
Turned	2	1	1
Took the cord up to the fundus of the uterus, and hooked it over the highest portion of the fœtus	3	3	—

In the last of the three cases treated by Croft's method I subsequently delivered the woman (a primipara) by the low forceps operation, as the head had been in the cavity of the pelvis for some hours, and, notwithstanding the double danger to which the child had been exposed from the prolapsus funis in the first, and the forceps in the second stage, it was born alive. I may mention, although it is hardly necessary to do so, that in all the cases the mothers did well.

If any gentleman should meet with cases of prolapsus funis, and remedy them by the method here advocated, I should feel greatly indebted to him if he would send me the particulars and results.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

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ST. GEORGE'S HOSPITAL.

CASES OF DELIRIUM TREMENS TREATED WITH OPIUM.

(Under the care of Dr. JOHN W. OGLE.)

Case 1.—Samuel G., aged 29. Brought into St. George's Hospital August 15, 1863, evidently suffering from delirium tremens. The tongue was, however, tolerably steady when protruded, but coated and sodden-looking; the pulse was quiet, and the skin cool. It was stated that for ten days he had been without any settled sleep, and had been the subject of wild fancies and visions. Camphor mixture, containing twenty drops of the liq. opii sedativ., one drachm of sulphuric æther, and ten grains of sesquicarb. of ammonia, were given every four hours, and he was placed upon ordinary diet, with one pint of porter and one of beef-tea extra. He passed a better night; and on the following day had an aperient senna draught.

The mixture, with the opium, etc., was continued from the 15th to the 19th, when it appeared that he had passed a very tolerable night. He was, altogether, much more "himself," and was fairly comfortable. Still, his sleep was much disturbed, and his manner was somewhat inconsequent.

On the 19th I ordered him two grains of quinine in a draught thrice a-day; and a night draught, with one-third of a grain of acetate of morphia, at night; to be followed by a senna draught the following morning; the opium and æther mixtures being discontinued. Extra meat was given for dinner.

The quinine was continued until the 28th, a little chloric ether being added on the 24th; and once he had the senna repeated. The morphia draught was only repeated once—on the evening of the 28th—as he was in all respects improving steadily. He was discharged, as able to return to his duties, on the 30th.

This patient had had a similar attack about one year previously.

Case 2.—Gustavus S., of middle age, was admitted into the Hospital August 18, 1863, with evident delirium tremens. The pulse was much quickened, the tongue was very furred and trembling, and there was tremor of the facial muscles.

It was stated that two days previously he had been seized with giddiness, and that seven weeks before he had been a patient at St. Bartholomew's Hospital, owing to an attack similar to the present one.

He was ordered twenty drops of the liq. opii sedativ., half a drachm of sulphuric ether, and eight grains of sesquicarb. of ammonia in camphor mixture every three hours, and also one pint of porter, two of strong beef-tea, and ordinary diet. On the following day it was reported that in the night he had been very restless and noisy. A senna draught was prescribed for the following morning.

The medicine was regularly continued until the 19th every three hours, when he had passed a much better night. I then ordered it to be given only three times a-day. He so far improved in all respects that on the 21st I omitted the opium mixture altogether, and gave him a draught thrice a-day, with eight grains of the ammonia, and one drachm of sulphuric ether, and compound tincture of bark, along with the compound decoction of bark, and a third of a grain of acetate of morphia at bed-time, to be followed by a senna draught on the morning after. Extra meat was given at dinner-time. On the evening of the 22nd the morphia draught was repeated. The medicine was continued until the 24th, when he was discharged as able to resume work.

Case 3.—Wm. H., aged 48, a butler, and a stout, healthy-looking man, was brought into the Hospital August 14, 1863, with delirium tremens, the first attack. It seemed that he had drunk hard very frequently, and for fourteen days his nights had been exceedingly restless, and passed almost without sleep. He had for that length of time been troubled by "shadows;" and on the night before admission had "seen all kinds of things," and heard "all sorts of noises."

When admitted his manner was excessively agitated and wild; the face was flushed; the skin warm; the pulse rather frequent. The bowels were said to be confined. The tongue was furred and tremulous.

Thirty drops of tincture of opium were prescribed to be taken at once, and after the fourth hour a draught of camphor mixture, containing twenty drops, to be taken every four hours. Ten grains of colocynth and calomel were ordered to be given at bed time, and a senna draught on the following morning. Strong beef-tea and a pint of strong porter were ordered, and on the 15th two pints of porter.

The opium draughts were continued until the morning of the 17th, the aperient pills having been repeated on the evening of the 16th. No improvement had, however, taken place; on the contrary, he had got manifestly worse; he had become more noisy, his nights had become more restless, and his fancies and visions more troublesome. His predominant idea was that objects, which he called "spirits," and which he could only describe as being like "jets of gas flame," and "fishes and things blowing," were constantly around him, and "poking and blowing" at him; and in the night he got out of bed and ran about the ward, and had become so uproarious, that it had become necessary to tie him down with handcuffs, etc. He was now ordered three pints of porter; and I gave him thirty drops of laudanum with a quarter of a grain of the potassio-tartrate of antimony in camphor mixture every four hours.

This he took up to the middle of the 19th, having become on the 18th so far quiet that the handcuffs were removed, but in other points he was in the same state. However, on the evening of the 18th he had got hold of a knife, and attempted (or pretended to do so) to stab one of the other patients.

On the 19th, at noon, I determined not to give him opium in such divided doses, but prescribed one grain and a-half of morphia with three grains of the extract of hyoscyamus, to be given directly, and to be repeated at the end of six hours, and also a draught to be taken every three hours, containing a drachm of sulphuric ether and ten grains of sesquicarbonate of ammonia.

On the following day it appeared that he had passed a very much better night and slept three or four hours comfortably. The medicine was continued, and another pill containing one and a-half grain of morphia prescribed for the night. Moreover, he was induced to take some roast meat, whereas hitherto he had refused meat.

Another much better night was passed; and on the 21st the medicine was ordered to be continued every six instead of every four hours, and another morphia pill prescribed for night.

On the 23rd the night had been passed so much more comfortably that I determined to omit the night pill, which was not again repeated.

On the 24th, as the night had not been so good, the medicine being continued, one-third of a grain of morphia was given at bedtime, and owing to this he passed a very tolerable night.

On the 25th no morphia was given, but on the 26th a grain and a-half of solid opium was ordered to be taken at bedtime, as the night had been more restless; quinine was also added to his medicine. The night was, however, not very good; and on the evening of the 27th two grains of opium were ordered to be given, to be followed by a senna draught in the morning.

He went on well without opium, a draught containing quinine and chloric ether having been substituted for the other one until the 31st, when it was judged advisable to give him a quarter of a grain of morphia.

On September 7 the patient left the Hospital, able to undertake his ordinary duties. The tongue was, however, somewhat creamy and white, and the appetite was not very good, but according to his own statement this was always so with him.

THE WORCESTER HOSPITAL.

SPONTANEOUS ANEURISM OF THE RIGHT CAROTID ARTERY CURED BY COMPRESSION.

(Under the care of Mr. SHEPPARD.)

T. P., aged 34, a policeman in the county force, tall and thin, formerly in the Navy, came under my care in the Infirmary, April 11, 1863. About six months before, he perceived a swelling on the right side of his neck, his attention being drawn to it by a pricking sensation, which gave him much annoyance. The swelling was then about the "thickness of his little finger." On the day of his admission there was a well-defined oval tumour, about the size of a small pullet's egg, beneath the angle of the jaw, immediately over the bifurcation of the carotid; it was moderately yielding to the touch, and had a very perceptible pulsation. With the stethoscope a loud sawing bruit could be heard. Pulsation and bruit were easily arrested by pressure deeper in the neck. He had some of the symptoms peculiar to aneurism in that situation, viz., giddiness, pricking pains, noise in the ear; his general health was good; he had not suffered from rheumatism, and there was no indication of heart disease. Pressure was commenced on the 16th by the patient himself; his right thumb over the artery, his fingers across the back of the neck; for the first few days the circulation was arrested or moderated for half an hour at a time; pressure was then gradually increased.

April 27.—The report says tumour feels harder, and is decidedly smaller, a less degree of pressure stops pulsation.

The case went on slowly, the aneurism gradually decreasing in size. At the end of the fifth week pulsation and bruit were quite gone, and scarcely a trace of the tumour was left. He remained in the Hospital another week, and then resumed his duties in the police force.

I do not remember having read in the journals a case of carotid aneurism treated by pressure. In the last edition of Cooper's "Surgical Dictionary," the writer, speaking of the treatment of aneurism by compression, remarks:—"In aneurisms occurring in the vicinity of the trunk, as in the iliac, the carotid, subclavian, and axillary arteries, it is quite inapplicable." Professor Erichsen, in his practical work, also says:—"The only means on which the Surgeon relies for the cure of aneurism of this vessel is deligation of the artery at a distance from the sac."

I give the above case as a rare exception to the general rule, and as one affording peculiar facility for compression. The patient had a long, thin neck; the tumour was in an early stage, well defined; the artery below the sac free from disease. The patient himself, an intelligent man (anxious to avoid being "cut"), was made to understand the *rationale* of compression, which he perseveringly carried out to a successful termination.

CHRONIC INVERSION OF THE UTERUS—REMOVAL—RECOVERY.

(Under the care of Mr. SHEPPARD.)

E. H., aged 25, was admitted under my care into the Worcester Infirmary December 6, 1862. According to her mother's account, she was delivered of a first and illegitimate child in May, 1859. The labour was lingering, and the removal of the placenta by the midwife was followed by severe hæmorrhage. On the fifth day, while in the act of passing water, she complained of "something coming down," and her mother states that the womb made its appearance externally, and was pushed back by the midwife. The pain was so severe, and the prostration so alarming, that a Medical man was sent for, who attended after some hours had elapsed, but no examination was made. From this date until she became a patient at the Infirmary (in December, 1862), she suffered almost constantly from menorrhagia, and lost great quantities of blood. When I first saw her she was perfectly blanched, and in the weakest possible condition. Feeling satisfied that there was some specific cause for this hæmorrhage, I at once made the usual examination, and found a small body about the size of the virgin uterus occupying the vagina. The finger could be passed completely round the broad neck of the tumour, which was closely encircled by the os uteri. Seen through the speculum, it had a soft vascular appearance, and when touched it was extremely sensitive and inclined to bleed. The uterine sound could not be made to pass more than a quarter of an inch within the cervix. The finger in the rectum detected the absence of the body of the uterus from its natural position in the pelvis, but could recognise a small movable tumour in the vagina. The patient was confined to her bed up to January 13 of the present year; but notwithstanding the use of strong astringents internally and locally, hæmorrhage still continued at brief intervals, and rendered operative interference necessary. Perhaps her countenance was a little less blanched than when I first saw her, but there was no difference in the size, vascularity, or sensitiveness of the tumour.

My colleagues having carefully examined the case with me, we came to the conclusion that the tumour was an inverted uterus, and that as no prospect existed of the patient recovering her health while it remained in the present state, its reduction or removal was imperative. The small size and firmly-contracted state of the organ, as also the length of time it had been inverted, rendered its reduction an impossibility. I therefore proceeded, under chloroform, to encircle it by means of the écraseur with an annealed wire; this was easily accomplished, but the wire giving way, I brought down the tumour with a pair of forceps, applied a whip-cord ligature, and separated it with curved scissors. The patient had no bad symptoms after the operation, but, owing to her weak condition from continual loss of blood, convalescence was very slow. The ligature came away at the end of a fortnight, but my patient remained in the Infirmary for another month.

When I last saw her, about a fortnight ago, she appeared in tolerable health, and capable of doing light work.

The uterus is preserved in the museum of the Hospital; it is about the size of a small walnut. A part of the lateral ligaments and Fallopion tubes are well shown.

The knowledge that inversion of the uterus is sufficiently rare to make its occurrence a subject of interest to your readers, has induced me briefly to detail the above case; its history, like that of most, or all other cases of inversio uteri, undoubtedly dating from parturition.

The diagnosis between inversion and polypus uteri has always been an acknowledged difficulty, and I can bear testimony to the great value of the uterine sound as a means of discriminating between them,—for a knowledge of which the Profession is indebted to Dr. Simpson, whose able paper in the first volume of his obstetric works is well known.

GUY'S HOSPITAL.

IMPAIRED HEARING OF TWELVE YEARS' STANDING—IMPROVEMENT IN RESPECT TO THE VOICE WITHOUT IMPROVEMENT IN RESPECT TO THE WATCH.

[Communicated by Mr. HINTON.]

To those who have studied diseases of the ear it has long been known that the sensibility to sound presents many peculiarities in different individuals. Apart alike from the general keenness of the sense, and from the range of pitch to which the hearing extends, some will hear one class of sounds well, and another class very imperfectly, while in others these conditions are reversed. Cases have been reported in which certain notes of the scale have been entirely inaudible, those above and below being well perceived. But the most common form in which the peculiarity comes before us, is that of the voice being heard relatively much better than the watch, or the watch much better than the voice. We are frequently consulted for deafness of a seriously embarrassing nature by patients who yet will distinguish the sound of a watch much further from the ear than some others who have never suspected any such infirmity in themselves. It is certain, also, that treatment will sometimes succeed in improving the hearing power for certain sounds alone, the hearing of others being unaffected, or affected in much less degree.

Of the causes of these peculiarities it is difficult to speak with certainty. Sometimes they seem dependent on congenital formation, a kind of acoustic colour-blindness, or tone-deafness. More often they seem due to the implication in morbid processes of particular parts of the auditory apparatus. Certain acoustic experiments, for example, render it probable that the membrana tympani is more concerned in the conduction of musical sounds or the tones of the voice, than in that of mere noise or isolated impulses; so that it has been suggested that the greater or less degree to which either of these classes of sounds were inaudible might be used as a means of diagnosing how far the membrana tympani was implicated in any given case. I have not, however, been able to convince myself that this view is borne out by the facts of disease. By way of contributing a fragment towards the elucidation of the subject, I subjoin an outline of one of the most marked cases I have met with of recovery of the power of hearing the voice, without a corresponding improvement in the ability to hear the watch.

Charlotte L., aged 49, single, a lively, rather small-made woman, of dark complexion, pale, but appearing in good health, applied to me on June 15 for deafness. She could hear the voice only when I spoke very distinctly within a foot or two of the ear. My watch, the full hearing distance of which is about 8 feet, was not heard on the right side; on the left only when laid on the meatus. On examining the ears each meatus contained a small quantity of wax. The membranæ tympani were nearly normal in appearance, being moderately translucent, though of a pearly hue, the bright spot clearly defined. They had, however, a high degree of concavity, the short process of the malleus standing very prominently forward. On the right side there was a small crescentic opacity at the upper and posterior part. The Eustachian tubes were pervious, and the patient could easily inflate the tympana, the air entering with a somewhat prolonged sound. Throat slightly tumid. She had been in the habit of pushing and rubbing the ears from below, having the feeling as of a stoppage there. This she thinks would make her hear better for a time.

She stated that about fifteen years ago she suffered much from ear-ache, which, however, she ascribes chiefly to the teeth. About twelve years ago she first noticed that she was hard of hearing, through not being able to hear the nightingale. Soon after she discovered that she could not hear her watch. From that time the deafness has progressively increased, and is increasing now. From the first she has had a frequent singing noise in her head, chiefly when lying down. Cause unknown. She was working on a farm, and used to go about much with bare head, and worked hard at churning. Health good. Has suffered at times from "rheumatic" pains. No relatives deaf except a brother, who became so between 20 and 30, and is now dead, and a cousin, who has since recovered. Hears worse in a noise; hears better the voice of young people than of adults; hears bells badly.

Air was blown into each tympanum by the Eustachian catheter. It entered freely, with the natural slight rustling sound. No effect upon the hearing.

The diagnosis was that there existed a rigid state of the tympanic mucous membrane, interfering with the motions of the membrana tympani and ossicles. The history of repeated ear-aches seemed to confirm this view. Accordingly, she was advised to place ten drops of chloric ether in a little hot water, and to inhale the vapour, endeavouring to pass it into the tympana by blowing with closed nose and mouth. This was to be done for about twenty minutes every night. The throat to be gargled with cold water. Salt water frictions around the ears.

In the course of a week she reported that she had heard better. There was no change in respect to the watch. The Eustachian catheter was repeated without apparent effect.

July 4.—Has continued to improve. The tinnitus had almost ceased, but has returned again. The voice is heard better; the watch is just distinguished on pressure on the right ear, as well as on the left. The membrana tympani is seen to bulge very freely on inflating the tympanum, but the action does not affect the hearing. Fifteen drops of the chloric ether to be inhaled night and morning.

11th.—A little more dull the last two days, which she ascribes to the weather. Has had a little irritation in the left ear. Use ten drops only at night. An ointment containing gr. x. of iodide of potassium and gr. j. of the biniodide of mercury to the ʒj., to be rubbed daily behind the ears.

On the 19th there was further improvement in respect to the voice. She hears a timepiece, not heard at first, at the distance of a-quarter of a yard.

25th.—Has had a chill, and some sore throat, and is not so well. Watch not heard by either ear. Throat appears healthy. On using the Eustachian catheter, the air entered the left ear with difficulty, and with bubbling sound in the throat. After it the watch was heard again. ℞ Linim. ammoniæ, ℥iss.; potass. iodidi, ʒss., bis die.

August 8.—Has still improved in respect to the voice; not in respect to the watch. Still a little irritation in left ear. There is a slight streak of redness along the malleus on each side. Air entered the right tympanum with dry, harsh sound, and not readily; the left with soft rustle, slightly improving the hearing of the watch on left side, but only to gentle contact, as at first. Cont. Lin. Apply to the throat by a camel's hair brush a solution of tannin in spirits of wine.

22nd.—Has been hearing well both the voice and the clock. She repeats after me, her face being turned away, numbers arbitrarily chosen, which I speak in a rather low tone at a distance of six feet. Does not, however, hear the watch on either side; says watch and bell are the sounds she hears worst. Omit treatment for a time.

September 19.—Has continued to hear better, and thinks she has improved. She hears irregular counting in a very moderate tone of voice quite well at twelve or fourteen feet. Is now scarcely inconvenienced in respect to hearing, though she is sometimes confused when several persons are talking together, and she does not hear bells so well as other sounds. The watch, however, is heard just as at first, viz., only on contact on left side. The membranæ tympani yield very freely on inflation. The noises continue, though not to the same extent, are worse after much talking or exertion of the ear; will begin if she thinks of them; are not now worse when lying down. I gave her canabis Indica, gr. ¼, twice a-day, with a view of testing its influence on tinnitus. It produced no effect, and was discontinued after a fortnight's use, when she described herself as much better in health than at the time of her first application, and very well satisfied with her hearing.

I should mention that the plan of dropping sulphuric ether into the meatus in a certain class of "rheumatic" cases having been spoken favourably of by some French Physicians, I applied it on two or three occasions, with the effect of producing some little redness of the membrana tympani, but with no influence on the hearing appreciable in the course of half an hour.

As to the cause of the improvement in this case, and the reason that it does not include all sounds, it is possible only to suggest probabilities. While there has been on the whole a steady advance in the hearing of the voice, and, according to the patient's statement, also of a timepiece and the church clock, the hearing of the watch has varied to a small extent, and is now as nearly as possible just what it was at first. On one or two occasions, but only when the patient described herself as being worse through a cold, the Eustachian catheter slightly improved the hearing of the watch, but this instrument never appreciably bettered the hearing of the voice. Although there is some reason to suspect that the function of the auditory nerve is not quite perfectly performed (if there is any evidence of this in the fact that a tuning-fork placed on the forehead or vertex is heard for a somewhat less period than usual), yet it does not appear probable that the special inability to hear the watch is connected with this portion of the organ. The idea that it is a natural defect is excluded by the fact that one of the first indications she observed of deafness was her not being able to hear her watch. I should be disposed to ascribe her deafness chiefly to a rigid condition of the mucous membrane of the tympanum, affecting in the first instance alike the membrana tympani and the ossicula. Under the influence of the remedies employed, it may perhaps be supposed that this rigidity has diminished, and especially that the membrana tympani has become more freely vibratile, as indeed it is seen to yield much more freely before the air when a forced expiration is made with closed mouth and nostrils. At the same time, it may be that there still remains a degree of rigidity in the articulations of one or more of the ossicula, sufficient to oppose a resistance to the short and isolated impulses of the watch. That the church clock and timepiece should be heard better than they were, might perhaps be ascribed to their more powerful vibrations; but that bells should still remain audible with difficulty unquestionably casts a doubt upon this explanation.

MIDDLESEX HOSPITAL.

POISONING BY AMMONIO-CHLORIDE OF MERCURY.

(Under the care of Dr. GREENHOW.)

Fanny P., aged 30. Admitted August 25. A strong, healthy, married woman of dissipated habits. About an hour and a-half before admission she had taken first a pennyworth of white precipitate (ammonio-chloride of mercury), and shortly afterwards a pennyworth of acetate of lead. In half an hour she had begun to vomit violently and to feel pain in the epigastrium, which gradually spread over the whole abdomen.

August 25.—On admission, face much flushed, general surface of the body perspiring. Pulse 88; moderately full. Respiration 24. Whole abdomen painful on pressure; tongue much coated; considerable nausea; thirst urgent. Slight subsultus. Lies in a drowsy, semi-comatose state. An emetic of sulphate of zinc, administered immediately on admission, produced copious vomiting of white frothy matter. A linseed poultice was applied to the epigastrium. The whites of six eggs mixed with milk to be taken immediately.

26th.—Still lies half conscious and much flushed. Tenderness of abdomen increased. Had a very dark green motion last night. A linseed and mustard poultice to the epigastrium.

27th.—Slight tenderness of gums, with loosening of teeth and increased flow of saliva. Great tenderness of abdomen. Face remains much flushed. Frequent jactitations of limbs. Convulsive twitching of eyelids. Subsultus continues. An alum gargle.

29th.—Face still much flushed. Pulse 82. Tongue thickly coated. Profuse salivation. Abdominal tenderness gone. Subsultus, jactitations of limbs, and twitching of eyelids continue. There is also general tremor, increased by excitement or by a draught of air. ℞ Ammon. hydrochlor., gr. x.; mist. camph., ℥iss. M., 4tis hôris sum.; garg. boracis.

31st.—Face generally much flushed, but becoming pale at intervals. Extremities very cold. Pulse 72; very feeble. Tongue still much coated. Salivation greatly diminished. Almost constant twitching of eyelids. Subsultus slighter. Occasional jactitations and general tremor, continuing only for about half a minute at a time. Sherry, ℥iv.

September 1.—Flushing, with occasional paleness as yesterday. Pulse 68. Extremities very cold. Tongue much coated. Salivation has almost ceased. Twitching of eyelids continues. Jactitations have greatly diminished.

5th.—Pulse 76; moderately full. No tenderness of gums nor salivation. Still slight twitching of eyelids and subsultus. Jactitations of limbs entirely gone. Discharged at her own request.

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Medical Times and Gazette.

SATURDAY, DECEMBER 19.

THE ROYAL MEDICAL BENEVOLENT COLLEGE AND ITS CHARGE FOR EXHIBITIONERS.

Medical men are averse to trumpeting forth their poverty; it is repugnant to their sensibilities as gentlemen, and they know very well that a mere suspicion of neediness would at once lay them open to disagreeable and damaging imposition. Whatever they do, whatever straits their families suffer at home, the appearance of being well-to-do must at all events be kept up. It is on account of this reticence of open complaint that every now and then we have to act as the mouth-piece of those who suffer from a variety of abuses which otherwise they would have to bear without the power of remonstrance, and it is to one of these troubles of our struggling brethren that we now propose devoting an editorial column. How is it that, up to the present hour, our Profession has not supplied itself with the means of giving a good and cheap education to its sons? Other professions have done so, why have not we? Whose fault is it? If we were to answer the last question according to our conviction, we should say it is the fault of the Treasurer and the Managing Council of the Royal Medical Benevolent College. Had it not been for the programme of the College originally set forth, and the repeated assurances given by the Treasurer and others, that it should be fulfilled; had it not been that the Profession placed reliance on those assurances, made over and over again in public and in private to those who felt the interests of the Profession compromised, such a school would have been established long ago. It is a fact, and a painful one, that the Royal Medical Benevolent College stops the way; it will not go on to fulfil its own project, and has hitherto hindered its execution by others. This is a serious charge to make; nor should we make it were we not ready to defend the assertion. The College was founded in 1851, with the announced object (amongst others) of affording an education of high character to the sons of Medical men for £25 per annum. This was just what was wanted, and everybody rejoiced at the prospect the scheme held forth. In 1855, the Council obtained an Act of Incorporation, which, had it not been such as to accomplish their views, they might have had modified, at the time, so as to harmonise with the original scheme. In April, 1856, the Council issued an address, in which they appealed for the co-operation of the Profession, partly on the ground that education at the College was not to exceed £30 for everything. In August, 1856 (when the school had been many months in operation), they sent out, however, another circular, stating that they had, "with regret been compelled by 'the Act' to raise the charge from thirty to forty pounds." The charge was made retrospective, and parents were required either to remove their sons or to pay the increased rate. This increased charge excludes those from the school for whose benefit it was specially designed. Seeing that the Act was passed in 1855, and the address we have referred to issued in 1856, was it not an injustice to attract scholars with a promise of education, etc., for £30 a-year, if it could not be fulfilled? Was it fair to the boys, or fair to the parents? Ever since that time, too, notwithstanding the subject has repeatedly been brought before the Council, and notwithstanding that they must be conscious that one grand object of the institution was being frustrated, no steps whatever have been taken to remedy the defect. An opinion of the Attorney-General even has been submitted to them, in which that high authority stands in direct opposition to the views held by the Council and their legal adviser, Mr. Wilcock. Why not submit both opinions to some third, and, if possible, still more distinguished lawyer; or, why not cut the knot by obtaining a new Act of Incorporation, and, if necessary, even reforming the constitution of the College? Anything is better than lying under a charge of not keeping good faith with the public. We hope the difficulties arising out of the Act of Parliament are not a mere pretext,—a stalking-horse for something behind. It is painful for us to hint at such an explanation, but it naturally crosses our mind when we see that no less than £1150 have been spent in feasting and entertainments out of public funds, of which we are told not one penny can, "according to the Act," be applied towards lessening the cost of education. An expensive entertainment may indeed find some apology at the inauguration of a grand public institution, but is it equally excusable to *fête* "the founder" every year at the cost of £116? Is this warranted by the Act of Incorporation? During the last two years the total income of the College, from subscriptions and donations, has amounted to £8664, and the expenses of "Pensioners" and "Foundation" scholars (that is, the whole of the "charitable" expenses) have only amounted to £4711. It cannot, then, be pleaded that funds are wanting, if only the will to benefit the less fortunate sons of Medicine were present. The truth is, that there is a large annual surplus of receipts over expenditure, some of which surplus at least ought to be applied for the advantage of "Exhibitioner Scholars,"—"ought," we say, because it was partly on the strength of the early promises of its promotors that the College received so large a share of Professional support.

The means of doing this it is for the Council to discover, and that quickly. The Profession has waited long enough, patiently enough, through all the early struggles of the College. Only do not let us be told that the thing is impossible. At the Royal Naval School the highest charge for the sons of officers is only £30 per annum, and some boys are admitted for half that sum; and, although the education provided is most excellent, the provisions of the best quality, and the supply unlimited, there is no legal difficulty at all about the matter, notwithstanding that they also have an Act of Incorporation. We hear that the Council of the Royal Medical Benevolent College "are considering the expediency of adopting changes which may eventually enable a certain number of scholars to be admitted at a lower rate than is at present paid by Exhibitioners." We should be glad to know what this very Napoleonic phrase may mean? Why not tell those who are interested in the matter what changes are contemplated? Surely there is nothing that should be concealed. Besides, concealment of the real state of affairs at the School is impossible; if the Council will not speak out, rumour will not be silent, and rumour is particularly busy among the governors of the College at the present time. Are we to infer from the contemplated introduction of lay scholars that the charge for "a certain number" of Medical scholars will be reduced to £25 (the sum originally proposed)? Or are we to understand that the Council have at length determined utterly to repudiate a portion of their original scheme? Unless they explain themselves they may depend upon it this is the interpretation which will be put upon the report which is flying about among the governors. The truth is, that the Council appear to wish to establish and maintain a school which shall vie with Eton or Harrow. Such a scheme is in itself a laudable one. But when contrasted with the real requirements of the Profession,

> "It's like sending them ruffles, when wanting a shirt."

Let it not be imagined that in making these remarks we are acting in any way in a spirit of opposition to the College; on the contrary, we look upon it as one of the noblest of those grand institutions which are the glory of our country. But we would see an end put to the wretched controversy which has for some years been raging among its supporters. We have opened our pages equally to both parties in the controversy, with the hope that matters would right themselves as the Institution became more flourishing. We now advise the managers to adopt a policy of conciliation, and one which shall unite all parties in a single endeavour to carry into effect all the proposals of the original scheme of organisation.

THE WEEK.

WHO IS TO BE MR. GREEN'S SUCCESSOR AS PRESIDENT OF THE GENERAL COUNCIL?

The whole Profession replies that it should be a Physician, a man educated and distinguished at one of the elder Universities, of mature age, of great authority in the Profession as teacher and Practitioner, of universal popularity and widest experience, and one against whom not envy or calumny herself could raise a voice. Such a man is Dr. Watson.

THE CASE OF SYMM v. FRASER AND ANDREWS.

A private meeting of the lay and Medical friends of Drs. Fraser and Andrews took place, on Wednesday last, at 5, Bloomsbury-square, for the purpose of organising a plan to relieve those gentlemen of the expenses with which they have been saddled by the late lawsuit. Amongst the members of our Profession present were Drs. Dobell, Greenhalgh, G. Harley, Ogle, Ramskill, Richardson, Sibson, Tuke, Walshe, and Webb, and Messrs. Partridge and Clarke. Mr. Wyatt, the magistrate, occupied the chair. Letters, expressing sympathy with the object of the meeting, were read from Dr. Fuller and Messrs. Erichsen, Paget, Propert, R. Quain, and T. S. Wells. The meeting resolved themselves into a committee, for the purpose of obtaining subscriptions to the defence fund; and a sub-committee, consisting of the following gentlemen, was formed to carry their purpose into operation:—Messrs. Wyatt, Bellingham, and Attenborough, Professor Partridge, Drs. Ogle, Walshe, Ramskill, and Tuke, Mr. Eiloart, Hon. Sec., and Messrs. Fergusson and Ernest Hart, Treasurers. The total costs of the defendants are, as we stated last week, about £700; the taxed costs amount to about £350; so that, assuming the latter be obtained from the plaintiff, there will still be £350 to be met by the defendants. We again appeal to our readers to come forward and hold Drs. Fraser and Andrews harmless in this matter. We are sure we need not add one word to impress on them the claim which those gentlemen have on the support of the Profession. Subscriptions will be received at the Office of the *Medical Times and Gazette.*

THE NEW WARRANT FOR THE INDIAN MEDICAL STAFF.

A DOCUMENT, purporting to be the new warrant for the Indian Medical Staff, has been published in India, and copied into some English journals. We have reason to believe that a warrant, very similar to the one thus put forth, had been prepared, and was on the eve of publication in the *Gazette*, but that difficulties have arisen in respect to its promulgation, and that for the present at least all intention of issuing it is abandoned. This will be a source of bitter disappointment to the Medical officers of the Indian forces, who have been so long counting on the appearance of the final decision of the Indian authorities in England respecting their position, terms of retirement, and many other matters of vital importance to their future interests; and will, no doubt, also have the effect of preventing higher-class students from competing for employment in a service in which so much dissatisfaction is known to exist.

POOR DOCTORS.

WE will not at present enter on the intricate subject of Poor-law Medical Reform, but we cannot refrain from saying how fully we appreciate Mr. Griffin's labours in the matter. We are the more anxious to state this prominently, as he has an additional claim to sympathy in the illness of his son, a Poor-law Medical officer at Southampton, who has been suffering seriously with scarlatina, contracted during the discharge of these duties. On recovery he forwarded to the Board of Guardians a long letter, in which he shows clearly the excessive overwork necessary for the proper performance of his functions. It is not possible to follow him into his minute statistics, which tend to show that he receives a remuneration of three farthings for each visit made to a sick pauper. On a single given day it seems "he attended at the surgery 45 paupers; visited at homes 106; dispensed 101 bottles of medicine; wrote 12 certificates; performed 2 serious operations, and confined 1 pauper, making in all 267 separate acts; and received as a recompense for work that day eight shillings and twopence three farthings." There having been a difficulty in procuring substitutes for him during his illness, the Board passed a resolution, "that, if Dr. Griffin is dissatisfied with the terms on which he holds his appointment, he be requested to tender his resignation of the same."

It is sad to think of educated men worked to death for merely nominal pay, though the remedy is difficult to find. It seems as though country practitioners were obliged to take Poor-law offices, or forego an effectual means of getting on in life. On the whole, it is to the advantage of our Profession that the posts should be in competent hands; and we can ourselves testify to the active humanity with which the task is often carried out. In a very similar way the unpaid officers of our metropolitan Hospitals and dispensaries are forced to go through much ill-remunerated labour, and often, like the Poor-law Surgeons, spend their time and the charitable funds on persons fully competent to pay for attendance. It is to be hoped that the Select Committee on Poor Relief, which is to meet next Session, may find itself able to deal with the difficulty.

"OUR HOMELESS POOR."

JUST at this season the luxurious readers of newspapers, greedy of "sensation," love to horrify themselves with accounts of poor wretches thronging the inhospitable doors of workhouses at nightfall on bleak wet days, denied admission by surly porters, and then dispersing to pass the night as best they may. Forthwith they blame the parishes for their parsimony, and perhaps send a mite to some refuge for the homeless. Now, it is quite as well to remind such persons that there are two sides to this question, and that the sterner way of dealing with "our homeless poor" may be the more merciful. What do these poor people consist of? and why should they come to the workhouses only at nightfall in cold weather? Let us suppose, in the first place, that "our homeless poor" may comprise a few persons of good character, who have fallen into misfortune. Some mechanic, for instance, disabled by sickness, unable to pay his rent, whose goods have been seized by distress, and himself, with wife and children, turned into the street;—which, by-the-bye, is impossible unless by a tedious legal process. Now, we need scarcely remind our readers that any man in such a plight could, if he chose, be received into the workhouse any hour of the day; his case would of necessity be known to the Relieving Officer long before the final catastrophe, and as for such persons being compelled to come in the evening to seek a night's refuge, it is purely their own fault. Next let us suppose that there may be a few real, honest working men on the tramp in search of employment, and unable to find it; people such as these who apply to Relieving-Officers are generally recognised and relieved. But there is for a residue the great mass of sturdy vagrants—persons of either sex, who hate regular work, and who love a free and easy Arab life; strolling about and picking up their living by begging; sleeping in the open air, or under hay-ricks in fine weather; and lustily demanding admission to Workhouses on cold evenings. Often they gather about Workhouse doors about dusk, in order to gather alms from passers-by. Such persons are a pest to every civilised community, and are the vehicles of every kind of vermin, wickedness, and contagious disease. To suppress this class of persons is one of the prime necessities of civilisation. If ratepayers are called on to provide food and lodging for them on demand, they ought to have police regulations, whereby known vagrants of either sex might be seized and washed, and made to work. If "our homeless poor" call on us for bed and supper at 5 p.m. we ought to be able to call on them at 6 a.m. to do a day's work. Any one who has ever undertaken the task of soliciting "our homeless poor" on a fine summer's day to come into a Workhouse, to be washed, and cleaned, and fed, and set to work, and who knows how such a proposition is met, will cease to clamour for alterations in the law, which shall serve for the promotion of vagrancy. Institutions such as the Field-lane Refuge deserve support; for the accommodations they offer are not luxurious enough for the professional beggar and thief, and they supply a gap which the Workhouse does not fill. But much which is maudlin and mischievous is advocated at this season by sensation-mongers. If we may advise the public as to charity, we would say, first pay your just debts; then, if you give in charity, give to the clean, and thrifty, and frugal amongst the labouring classes, not to those who trade on wretchedness.

THE CASE OF GEORGE VICTOR TOWNLEY.

THE plea of insanity set up in the case of the unhappy man who murdered Miss Goodwin was urged on totally different grounds to those which have been held to afford it sufficient foundation in numerous former tragedies. There was no shadow of evidence produced that the murderer laboured under that causeless and uncontrollable impulse to destroy which is known to Medical jurists as homicidal insanity. In his case the motive was apparent, and was freely acknowledged by him immediately after the commission of the crime. "She has deceived me; and the woman that deceives me must die." "I told her I would kill her. She knew my temper." "Poor Bessie, you should not have proved false to me." The murder was simply an act of vindictive jealousy. Townley was thoroughly alive to its nature and consequences. He said, "I am the man who did it, and I shall be hanged for it." Even admitting all that was urged by the defence, we do not see that, after such declarations from his own lips, a court of justice could do otherwise than find him guilty. No doubt, Townley's provocation was, to a mind constituted as his, very great; but no amount of provocation will excuse a cold-blooded murder. Even if the proofs of insanity in his case were far stronger than they really are, we do not think that the interests of society would be safe if such a criminal had been acquitted. Any man who permits his passions to acquire an entire mastery over his conscience and judgment is for the time morally insane; but this is the mental condition under which most great crimes are committed, and it is exactly that which laws are enacted to restrain. It will be observed that the evidence of insanity in Townley's case previous to the commission of the murder was of the weakest description. He was a man of quiet and refined manners, a good linguist, and an accomplished musician. He had a poor capacity for business pursuits, but was in the habit of giving French lessons, and was treated and considered by all his friends and relatives as perfectly sane. He was generally kind, but very reserved. The fact of his mistress having proved false to him undoubtedly affected him intensely. No doubt, as Baron Martin said, his sufferings had been very great. But his demeanour under those sufferings was only that of a man of an extremely sensitive, passionate, and uncontrolled temper. It was proved that there was hereditary insanity in the collateral branches of his mother's family, but it does not appear that any suspicion of his having been under its influence was ever entertained. The evidence of Dr. Forbes Winslow and Dr. Gisborne only applied, as the former gentleman observes in a letter which we elsewhere publish, to his present state. It is quite possible that the horrible scenes through which he has passed, the mental torture he must have endured, and his confinement, may have called into action his hereditary malady. At the same time we must confess we see, in his assertion, that Miss Goodwin's murder was "neither a crime against God nor man; that he considered Miss Goodwin was his own property; that she had been illegally wrested from him by an act of violence; that he viewed her in the light of his wife who had committed an act of adultery; and that he had as perfect a right to deal with her life as he had with any other description of property," no proof of insanity, but only the reasoning of a proud man, determined, at least, to set up a plea of justification which should satisfy his own mind, and fortify himself against remorse. It is certainly no evidence of such mental aberration as would imply irresponsibility. On the other hand, the delusion of a conspiracy having been formed against him is undoubtedly an insane idea. But it does not appear that this idea was entertained by him before his crime; and unfortunately there is sufficient evidence that he was under no delusion as to the effect of his act on his victim, or as to its consequences to himself.

MR. BARON PIGOTT AND THE WINCHESTER PRACTITIONERS.

Public attention has of late been so closely directed to the subject of infanticide as to give additional importance to a recent trial at Winchester. We have to thank a correspondent for further and more accurate particulars than were furnished by the daily journals of the 5th instant. Indeed, these exhibit an amount of interest not confined to their special subject. Taken in conjunction with the court-martial at Aldershott, and the recent charge of Mr. Justice Martin, they go far to supply the text of an essay on Medical evidence generally. The facts, stated briefly, are as follows:—A young girl, named Ellen Shepperd, was confined clandestinely of a female child, which, on inspection, was found to present evident marks of having suffered strangulation by means of the hands. The angles of the mouth were torn out, on one side to the extent of three-quarters of an inch. The parietal bone of either side was fractured through its entire extent, both transversely and longitudinally, even the squamous portion of the temporal bone of one side being involved. Extensive effusion of blood existed under the scalp, also beneath the periosteum, and again between the dura mater and bone. The lungs were perfectly inflated, and the whole case showed what were considered unmistakable signs that the child had been fully born alive. The Medical conclusions were, accordingly—1. That the child had been born alive (*i.e.*, legally speaking). 2. That such injuries could not collectively have been occasioned during the process of birth, or by accident after birth, such as by falling from the mother while in the standing posture. 3. That the child had died in consequence of the injuries inflicted. The Coroner's jury held the evidence conclusive, and returned a verdict of wilful murder. Mr. Justice Pigott, however, in his charge to the grand jury, imputed to the Medical witnesses a somewhat hasty *hypothesis*, that murder had been committed, from certain marks of blood on the wall of the room. He stated, in the face of the depositions, that he could not share the Medical men's suspicions, and advised them to dismiss the bill. A true bill was found notwithstanding; and at the trial, Mr. Buckell was fully supported by Dr. J. N. Heale in his view of the case. The judge again, in summing up, tells the jury that the Medical evidence was theory; that all these injuries might have resulted in some way quite accidental; and that, therefore, of course, they would not convict on such evidence. A verdict of not guilty was the obvious result.

It cannot be matter of much surprise that the new representative of the Sovereign has not yet gained golden opinions from the Medical Profession in Winchester any more than from the Dean and Chapter of Exeter. And the whole case certainly leads to the question of what possible avail can Medical testimony be in such instances. If, although given under heavy responsibility, it is to be treated with disregard and almost contempt, there is sore danger of its being withheld or reduced to an unwilling reticence. And yet, at Southampton, infanticide seems to be so extensively and successfully carried on, that the mayor has offered a reward of £50 to any person who can bring evidence of it sufficient to secure conviction. If it is admitted that judges will not instruct, nor juries convict, on any evidence whatever—in consideration, on the one hand, of the circumstances accessory to the crime, and, on the other hand, owing to the disproportionate sentence alone open to them for award—it were well that the Medical Profession should be relieved of a duty as painful as it is humiliating.

THE DEGREE OF MASTER IN SURGERY IN THE UNIVERSITY OF DUBLIN.

In our impression of the 5th inst. we alluded to the recent establishment of the degree of Master in Surgery in the University of Cambridge. This degree has been conferred in the University of Dublin since 1859, and in the course of the present year ten candidates have been admitted to it. During the same period twenty-four gentlemen have received the degree of Bachelor of Medicine. These degrees are, as is the case also with degrees in Divinity and Law, conferred only upon candidates holding a degree in Arts; consequently, all Medical and Surgical graduates of the University must have passed, within its walls, or in the University of Oxford or of Cambridge, through four years' study in classics, mathematics, logics, physics, and ethics. To meet the case, however, of students who may be unable to obtain a full University education, the Licence in Medicine has been established. This licence, which is admitted to registration under the Medical

Act, is obtainable under the conditions mentioned below. During the present year it has been conferred upon three candidates. The total number, therefore, of Medical and Surgical degrees and licences conferred in 1863 by the University of Dublin is thirty-seven; during the same period eight candidates have been rejected, a proportion of nearly 18 per cent. From the last paragraph of the published regulations respecting the Licence in Medicine, it will be seen that an arrangement has been entered into between the University of Dublin and the Royal College of Surgeons in Ireland, by which the admission of licentiates of the latter body to the Licence in Medicine is facilitated, while the amount of education in Arts required for the special examination is such as to tend to raise the *status* of the holders of the joint qualification.

The following are the regulations respecting the *Licence in Medicine* as recently modified by the Board of Trinity College:—

"Candidates for the Licence in Medicine must pass the following special Art Examination, unless they be students in the Senior Freshman, or some higher class:—

"Homer's Iliad, Books I., II. (omitting catalogue of ships), III.; Lucian's Dialogues (Walker's edition); Xenophon's Anabasis, Books I., II., III.; Virgil, Æneid, Books I., II., III.; Sallust; Horace, Satires; Latin Prose Composition; English Prose Composition; English History; Modern Geography; Arithmetic; Algebra, to the end of Simple Equations; Euclid, Books I., II., III.

"In case the student should wish to continue the Undergraduate Course in Arts, with a view to the degree of B.A., his answering in the above will be reckoned as equivalent to the Entrance and Hilary Examinations of the Junior Freshman year.

"Students who have passed the foregoing Examination will be required to pay the admission fee of £15.

"Candidates for the Licence in Medicine must also be matriculated in Medicine, and must have completed four years in Medical studies.

"The Medical course necessary for a Licence in Medicine is the same as for the degree of M.B., with the exception that any general Hospital approved by the Board of Trinity College may be substituted for Sir Patrick Dun's. A fee of £5 is charged on taking the Licence.

"Candidates who are already Licentiates in Surgery of the Royal College of Surgeons in Ireland, on passing the foregoing Art Examination, will be admitted to Examination for the Licence in Medicine. Such candidates will be exempted from examination in Anatomy and Surgery; and candidates who have also the Licence in Midwifery of the said College will be exempted from examination in Midwifery."

In addition to long and searching written and *viva voce* examinations for the degrees of Bachelor of Medicine and Master in Surgery, candidates for the Mastership in Surgery are required to operate on the dead body in the theatre, in the presence of the Professors and the pupils.

FROM ABROAD—THE NEW FRENCH MEDICAL DICTIONARIES—DR. BORELLI ON DOMINANT MORBID CONSTITUTIONS—THE PRIZE SYSTEM IN FRANCE AND ENGLAND.

The prospectuses of the two projected French Dictionaries of Medicine, which we announced as about to be published, have now been issued. The largest of these important works has been undertaken by the houses of Masson and Asselin, and is to consist of twenty volumes in octavo, of about 800 pages each, illustrated by woodcuts, and will be issued by half-volumes at a time, at five shillings each, the first of which will appear early in the ensuing year. The list of contributors comprises more than one hundred names, the rising celebrities of "young France," both civil and military, being largely represented in it, supported by a sprinkling of veterans. Its title is to be "Encyclopædiacal Dictionary of Medical Sciences," as it is intended to include Materia Medica, Hygiene, and the accessory sciences. The offers of co-operation have been made in even greater numbers than could be accepted; "for every one has felt that the conquests realised by Medical science during the last thirty years, the new directions in which it has become engaged, the innumerable facts which have enriched it, and the multiplied and fruitful reciprocal relations it has established with physics and chemistry, exhibit an amount of progress that renders insufficient all publications which, by their very nature, are not susceptible of frequent editions." The number and character of the contributors, the editors assure us, will ensure the rapid production of the work, and that the articles shall really be written by those whose names are subscribed to them.

The "New Dictionary of Practical Medicine and Surgery," issued by Ballière and Son, is to be a somewhat less extensive undertaking, as it will only extend to twelve or fifteen volumes of 800 pages, with woodcuts. Three volumes are to appear annually, at a charge of 8s. each. The contributors are about thirty in number, among whom are the well-known names of Giraldès, Gosselin, Nélaton, Ricord, Tardieu, and Trousseau. The editor observes that the present epoch of Medical literature is characterised by an abundance of special treatises and monographs, disseminated on every side, and, therefore, but ill-known and appreciated; and that for some time past the desirableness has been apparent of presenting a clear view of the present and actual state of Medical science by assembling and arranging these scattered labours in an accessible form, exhibiting at one view what is known on the respective subjects, and forming a starting-point for future researches. This will be best accomplished by a union of Physicians and Surgeons, sufficiently considerable so that each may treat that subject most consonant to the habitual tenor of his researches, and yet limited enough to enable a certain unity of Medical doctrine to be maintained.

Those who are aware of the predominance which antiphlogistic doctrines retain in Italy, and the fatal facility with which the lancet is still wielded there, will feel gratified at finding that one of the most distinguished of the Turinese Practitioners, Dr. Borelli, admits that there is something wrong in this matter. He announces to his countrymen, with somewhat the air of a discoverer, the fact, long since admitted by the rest of Europe, that individuals neither require nor will bear the depletory treatment which awhile since seemed indispensable. In some articles contributed to the Sardinian *Gazetta Medica*, he maintains that for more than two lustres past the special morbid constitution which has predominated has not disposed to diseases of inflammatory, but of neuralgic, periodic, or typhoid types, in which tonics, restoratives, revulsives, and anti-periodics are indicated rather than the loss of blood. The history of Medicine, however, he adds, shows us that this is no more than we ought to expect; for at different epochs the character of the morbid constitution has been found undergoing changes, and these changes have influenced the origin and propagation of the various systems of therapeutics. Thus, the Brunonian system of the end of the last century became supplanted by the antiphlogistic theories prevalent during the French empire, and these in their turn have undergone displacement in our own time, disease having, in fact, again assumed characters much resembling those exhibited during the first of the abovenamed periods.

In the number and value of the prizes at their disposal, the Medical and scientific bodies of France put those of our own country to shame. Some of these, bequeathed or presented for distribution to the Academies of Medicine and Sciences, are very considerable, even in a money point of view, and they are continually on the increase in point of number; so that it is difficult for any work in France manifesting the slightest merit to escape its reward. In fact, while we might with great advantage imitate to a greater extent this liberality of our neighbours, it may be doubted whether they do not carry it a little too far, and constitute by it a portion of that fostering process which seems so much more congenial to them than to ourselves. Many works are certainly thus forced into existence, and pampered, the merits of which, and the permanent reputation they confer upon their authors, are very questionable. Whatever view one may take of the matter, certain it is that there is a far greater disposition on the part of wealthy persons in France to institute rewards for the pursuit of scientific objects than is the case in this country; and M. Flourens, the Secretary, acquainted the Academy of Sciences the other day with the fact of a new bequest having been made to it under somewhat interesting and touching circumstances. "Mademoiselle Letellier, the friend of the illustrious Savigny, at once his companion and supporter, not content with having alleviated the sufferings of this martyr of science, and prolonging his life, has maintained his influence upon the progress of zoology by providing the means for the continuance of his enterprises even after his death. By her will she has bequeathed 20,000 francs, in trust to the Academy, in memory of Lelorgne de Savigny, Member of the Institutes of France and Egypt, the interest of this sum to be employed in assisting young zoological travellers, not in receipt of pay from the State, who may be especially engaged in the investigation of the Invertebrata of Egypt and Syria. Being thus placed in a condition to publish their works, they become constituted the continuators of the researches of Savigny himself in those countries—researches which were only terminated by the cruel disease which brought him to the grave.

JOSEPH HENRY GREEN.

OUR readers have, ere this, heard of the decease of Joseph Henry Green on December 13. In him we have lost a great man, and a great master of our Art. The tenor of his life during the last twenty years was not one to bring him much into contact with the busiest members of our busy Profession, yet there is scarce any one who has not heard of him as one of the greatest practical Surgeons of thirty years ago, and as one of the most active members of the governing body of the Profession to the day of his death.

The leading events of his life are soon told. His early education was of the most ample and pre-eminently liberal order. We know not where it was obtained, but may assert that the man or the school which could boast of having taught him, would need little else to make it famous. His Professional studies were begun at St. Thomas's Hospital under the tutelage of Mr. Cline, his mother's brother, and were further carried on at Berlin, to which place he was accompanied by his mother; and in his case it would seem as if the common idea were well-founded, that it is to the mother that most great men owe their greatness. When at the age of 22, he was employed as Anatomical Demonstrator at St. Thomas's; in 1815 he became a member of the College of Surgeons; in 1818 he lectured on anatomy and physiology jointly with Sir Astley Cooper; and in 1820, then in his 28th year, he was appointed Surgeon to St. Thomas's, on the death of his cousin, Mr. Henry Cline, junior,—a man taken away too soon from the friends who never seemed weary of dwelling upon his loss, and from his Profession, of which he seemed destined to be an ornament. In speaking of Medical Schools in this bygone period, we must not forget that they were usually in part, or entirely, private speculations, and not schools such as we understand now, that is to say, institutions of a public character furnished with professors and apparatus for teaching every branch of Medical knowledge—but fragments of schools, containing often little more than the anatomical class as the nucleus and foundation. We regret the extinction of private schools and of independent classes in the present day by the "Regulations" of Examining Boards, as we regret everything that limits competition, and prevents men who have gifts from using them to their own advantage and that of others. If a man have knowledge and power of teaching—say midwifery or chemistry—why not let him have facilities for teaching? Yet, it must be confessed that there is one source of annoyance and discord in the private schools, from which the man who holds a lectureship by public appointment as the officer of a public college is free; there is the commercial taint—the negotiations for buying and selling a share in the concern, and of the requisite plant and apparatus, and the necessity for a heavy outlay. Mr. Green paid Sir Astley Cooper £1000, according to the following document:—

> "Received, August 3, 1820, of Mr. Joseph Henry Green, one thousand pounds, in full consideration for one half of the collection of Anatomical Preparations and Preparations of Morbid Parts, contained in the Museum of St. Thomas's Hospital, together with the Drawings and Apparatus used in the teaching of Anatomy in the same Hospital.
>
> "(Signed) ASTLEY COOPER."

Things did not long go on happily at St. Thomas's. Sir Astley had nephews—it was difficult to make vacancies for them—a rival anatomical school was set up at the neighbouring Hospital (Guy's). Sir Astley and his nephews wanted to take their moiety of the Museum over the way. But they had forgotten the distinction between tenants in common and joint tenants. A formal set of articles of agreement had been drawn up; first between A. Cooper and Cline senior, then between him and Cline junior, to whose interest Joseph H. Green was successor. (Amongst other things it was stipulated that "the firm of the lectures shall be that of Cooper and Cline.") It was agreed that the Museum was to be an inseparable collection, and that, if either of the partners should die or resign, the survivor should possess the whole, paying an additional £1000 for the second moiety. Mr. Green published "A Letter to Sir Astley Cooper on certain Proceedings connected with the Establishment of an Anatomical and Surgical School at Guy's Hospital. London: 1825." This bulky pamphlet, which shows a ghostly glimpse at times gone by, was composed with the subtlety of a lawyer, and the conscious air of one who is reading a lesson in morals. No doubt Green was right. In referring to it we give it as an illustration of the history of the last generation, and not to put on perpetual record the frailties and misunderstandings of honourable men. Mr. Green soon acquired great repute as a teacher and operator, became Fellow of the Royal Society; and on the establishment of King's College was appointed Professor of Surgery in that institution, an office for which his highly conservative and religious tone of mind peculiarly fitted him. He held this Professorship till 1837, when having always been opulent, and being an only child, and himself childless, a fresh accession of fortune determined him to retire alike from the public teaching and practice of his Profession, and to remove from his Professional residence in Lincoln's Inn Fields to his country seat at Hadley, near Barnet. Nevertheless, although not in practice, he retained the Surgeoncy to St. Thomas's Hospital, took the most active share in the government of the Profession, and attained to its highest honours. We must not omit to state that he had been Professor of Anatomy and Surgery to the Royal College of Surgeons, and Professor of Anatomy to the Royal Academy, which latter office he resigned at the same time that he did the King's College Professorship, and was succeeded by Professor Partridge. He was elected of the Council of King's College. In 1835 he was made Councillor of the College of Surgeons; and in 1840 and again in 1847 delivered the Hunterian Oration. In 1846 he was elected a member of the Court of Examiners; and in 1849 and again in 1858 was President of the College.

As the *ne plus ultra* of Medical dignity he was appointed by Goverment President of the Council of Medical Education and Registration of the United Kingdom, on the decease of Sir B. Brodie last year, and presided at its deliberations during the last Session. Gout and heart disease at last brought his life to a close; and by his decease he leaves vacant the presidency of the Council of Medical Education, a seat in the Court of Examiners at the College of Surgeons, and in the Council of the College, and likewise at the Board of Examiners in Dentistry, and the chairmanship of the Medical and Clerical Life Assurance Company.

The man who held so many and so important offices was no common man. It would be difficult to conceive of one on whom Providence had showered more abundant gifts—fortune, education, family association with men eminent in his chosen Profession and able to place him well at the outset of life, a fine person, melodious voice, great eloquence, Professional success, favour with the people, friendship with philosophers, occupation singularly suited to his powers and tastes, and dignities which fell to his share without the penalties of competition and rivalry. His tall, singularly fine person, his handsome features, his mouth curled by a quaint smile when about to utter some apposite answers to the questions which used to pour upon him from students after lecture, his gestures stamped with dignity and self-reliance, were apt accompaniments to his imperturbable coolness, his marvellous self-possession and fertility, never at a loss what to think or say or do. As an operator, he was coolness and courage personified; and this the result of no slap-dash temerity, but of that careful pre-consideration by which every possible accident is provided for, and met at the instant. A friend relates that, during an operation of one of his colleagues, the assistant let go the femoral artery; Green's finger was on the spot, quick as the eye could follow. He had great repute as a lithotomist, and it is said, that in 1827 he had operated on forty cases and lost only one. If any proof be needed of his greatness as a Surgeon, let it be seen in the fact, that when at last, on his retirement as Surgeon, he was appointed Consulting-Surgeon to his Hospital, he was not shelved, as is the common way, but actually consulted by his colleagues on their difficult cases! The singularity of this will be impressive to those who are familiar with the Surgical staffs of some Hospitals. His knowledge of anatomy was, it needs scarcely be said, complete. He had, in 1820, published a Dissector's Manual, which seems never to have attained any great vogue; but he was likewise, thanks to the Hunterian Museum, a great Comparative Anatomist,—(or, to speak more truly, he was an Anatomist),—whilst most of his compeers attended to Anthropotomy only. He tells us, in his first Hunterian Oration, of the sneers which used to be cast at men who were "unpractical" enough to attend Hunter's lectures, and of the old Surgical bigots who said that the preparations in the Museum were just as valuable as so many pigs' pettitoes. As in Anatomy, so in all things else. It was out of his nature to take the smaller and more contracted view, if there were a broader one to be attained. Breadth and grandeur were his characteristics. He moved amongst Surgeons as a Michael Angelo or a Handel amongst artists and musicians. Nothing that was little or mean could be framed by his mind or uttered by his lips. His stately oratory flowed on, as Longinus says of Plato, with the majestic calmness of a mighty river. Whether it were a description of the highest philosophical principles, of the very depths and arcana of Surgical science, or of the commonest details belonging, to use Sir Thomas Browne's words, to "the very *infimy* of our nature," the language was sonorous, weighty, and dignified; and the diction used in detailing the properties of a poultice rolled on in periods such as would have gladdened the soul of Samuel Johnson. It is impossible to overrate the influence for good which such a teacher must have exerted over the minds,—say, rather, over the whole hearts and being of the hundreds of young men who flocked to his teaching. Whilst ostensibly learning the principles of Surgery, they were imbibing lessons of life and manners, taste, philosophy, and morals; they were taught the awful responsibility of their calling; they were indoctrinated with sentiments of the highest honour. Coming, as many of them did at that day, from country surgeries, with country speech and manners, and with that lamentable interval of apprenticeship which had enabled them to forget the education of the school-boy, without getting much more than the way of carrying on Medicine as a trade, the aspect of Professional life and duty, the vistas of science, presented to them in the oratory of Mr. Green, must have seemed as the harmony of a mighty orchestra to one who had heard nothing better than the asthmatic squealings of a village band. The pupils used, as is their wont, to crowd round him after lecture, asking questions, and receiving explanations, always given with geniality and kindness; although it must be confessed that he must, on one occasion, have felt his forbearance tried. When about to leave King's College, it is said that one of the students, a very little fellow, said to him, "Is it true, Sir, that you are going to leave the Profession, and turn poet?" Green made no answer, but took a frightful pinch of snuff, and gave the questioner a look which would have annihilated a man with any soul in him; though it need scarcely be said that one who could put such a question had nothing in him that could be hurt by a look. The query was founded on the common report of Green's intimacy with Coleridge, and of his intention, as was alleged, to devote the remainder of his life to the editing of that philosophical poet's works and promulgating his opinions. It may not be generally known that Mr. Green himself was a poet; and, at the suggestion of a friend, we append specimens of two of his poems, with a note by S. T. Coleridge.(a) If his style as an orator was Ciceronian, as it really was, suggestive of the Latin framework in language and style, rather than of the Saxon, smacking more of Hooker and Jeremy Taylor than of Cobbett and Defoe; so, also, we fear that he may rank with Cicero likewise as a poet. But to return. His later Surgical teaching, excellent as it was, so far as it went, scarcely kept pace with the day,—even that day. His mode of philosophising no doubt tended, however unconsciously, to strengthen that suggestion which fifty years generally bring with them, to "rest and be thankful." His aim was to find general laws and great principles; and the man who believes he has found these, is not usually the one to go on searching for new details. His pathology had fallen into that peculiar stereotyped Borough-Hunterian groove, into which whosesoever opinions were moulded, was scarcely ever able to remodel them. Men may be heard still speaking of "action of vessels," "stimulus of necessity," "inflammatory adhesion of wounds," and the like, which show that their mental powers of assimilation came to a standstill before the modern microscopic era began, and that their first notion and their last is a hazy one of the "Surgical science" of Hunter. It is a curious fact, though this is not the place to dwell upon it, that Sir Astley Cooper, Green, Travers, and the Borough School of that day—idolators of John Hunter as they pretended to be—were like Papists without transubstantiation, or Calvinists who had thrown predestination overboard. Hunter's great point is union by first intention without inflammation. The Borough School taught, on the contrary, that the very prick of a lancet would be fatal, unless inflammation followed to heal it. But, in truth, in Hunter we have two distinct personalities. As the great collector of visible facts in the Museum, and the cautious and acute observer of Surgical cases, he is always to be trusted. The hazy and mystical theorist which he shows himself in the work "on the Blood, etc.," would have been condemned to oblivion long ago, had not it seemed impossible, but that whatever was written by the author of the "Museum" must be reckoned as a thing which *ipse dixit Magister*, and be received unquestioned. As an admirer of that truly great man, whose sterling facts gave undeserved currency to pinchbeck theories, and as President of his College, Green assisted at the translation of Hunter's remains from St.

(a) From Coleridge's "Poetical Works," Pickering's Edition, 1847, Vol. ii., pp. 133:—"Anxious to associate the name of a most dear and honoured friend with my own, I solicited and obtained the permission of Professor J. H. Green to permit the insertion of the two following poems, by him composed."—S. T. Coleridge.

"MORNING INVITATION TO A CHILD.

"The house is a prison, the school-room's a cell,
Leave study and books for the upland and dell;
Lay aside the dull poring, quit home, and quit care,
Sally forth! Sally forth! Let us breathe the fresh air!
The sky dons its holiday mantle of blue,
The sun sips his morning refreshment of dew,
Shakes joyously laughing his tresses of light,
And here and there turns his eye, piercing and bright;
Then jocund mounts up on his glorious car,
With smiles to the morn—for he means to go far;
While the clouds, that had newly paid court at his levée,
Spread sail to the breeze, and glide off in a bevy.
Tree, and tree-tufted hedge-row, and sparkling between
Dewy meadows enamelled in gold and in green,
With kings cups and daisies, that all the year please,
Sprays, petals, and leaflets, that nod in the breeze,
With carpets, and garlands, and wreaths, deck the way,
And tempt the blithe spirit still onward to stray,
Itself its own home; far away! far away!"

* * * * * *

(A second stanza follows in the same style.)

"FROM 'CONSOLATION OF A MANIAC.'

. . . . . . "That dream,
That dream, that dreadful dream, the potent spell,
That calls to life the phantoms of the past,
Makes e'en oblivion memory's register,
Still swells and vibrates in my throbbing brain!
Again I wildly quaff'd the maddening bowl,
Again I stak'd my all, again the die
Prov'd traitor to my hopes; and 'twas for her,
Whose love more madden'd than the bowl, whose love,
More dear than all, was treacherous as the die.
Again I saw her with her paramour,
Again I aim'd the deadly blow, again
I senseless fell, and knew not whom I struck,
Myself, or her, or him. I heard the shriek,
And mingled laugh, and cry of agony;
I felt the whirl of rapid motion;
And hosts of fiendish shapes, uncertain seen
In murky air, glared fiercely as I pass'd;
They welcomed me with bitter laughs of scorn—
They pledged me in the brimming cup of hate."

* * * * * *

Martin's-in-the-Fields to Westminster Abbey, and their re-interment on March 28, 1859. A somewhat cold and slovenly ceremonial it was. True, an anthem was introduced into the ordinary afternoon service, which had been composed a century before in commemoration of the Queen of George the Second, and which commemorated her *charity* in the ordinary sense of the term. But there was neither anything to thank God for the good which Hunter had done, nor to instruct those present to follow his example or to profit by it. There was not so much a procession as a race round the aisles of the Abbey, with which we saw an octogenarian pupil of Hunter vainly endeavouring to keep pace, and the silent lowering of a coffin, amongst the jostlings of a crowd, most of whom knew not the meaning of the proceedings. The one grand feature of the ceremonial, which impressed us, was the sight of Green as he stood at the head of his colleagues, who were assembled in the Jerusalem Chamber. Would that some sculptor could preserve for posterity that grand form, with the head bowed in deep and reverent meditation! Would, too, that he had been permitted to have addressed the multitude, if not in the Abbey nave, at least in some part of the precincts! How he would have electrified the Dean and Chapter! How he—whose profession was philosophy, and his philosophy, religion; who saw in matter not matter, but forces acting by the will of God; who looked on all genius, all knowledge as an emanation from that Word of God, by whom all things were made, a ray of the True and Only Light—how he might have discoursed on the text —"To another the gift of healing, by the same Spirit!" But no. The oracles were dumb. Any one who wants an instance of the icy formality which enchains the Church of England may find it in the so-called ceremonial of the Translation of Hunter's remains.

On the day following Green delivered an oration to the "Committee for the Erection of a Statue to John Hunter" at the College, in which he commemorates alike Hunter's grand conception, the Museum, to illustrate the laws of life, and those notions of his on "action of vessels," "absorption," etc., which are now becoming obsolete, and always were examples of inference from insufficient data.

As one who was incessantly conversant with the government of the Profession, Green was a great Medical politician and reformer. But his politics were of the most "paternal" and despotic order, although his reform really consisted in efforts not to level and pull down, but to raise the status and education of our Professional brethren and successors. Early in life he desired to exclude the reporters of lectures and cases from the Hospital walls. "What a horrid thing," said the Borough men, "for a young Surgeon who did an unlucky operation to have it spread about!" They never seemed to think what would be best for the patients. But Green's conservatism, as regards the constitution of Medical corporations, flowed direct from his system of philosophy. He truly lived in a Theocracy. As all the phenomena of Nature and its laws were expressions of the Will of God, and all knowledge an emanation from His Light, so was all authority a reflex of His Government. Hence, said he, if a set of tradesmen choose to establish a guild or partnership, for the sake of pounds, shillings, and pence, let them, if they will, elect their officers by common suffrage. That is truly their affair. Not so, when, to use the Homeric phrase, some Heaven-nurtured king commits to a chosen few the sacred trust of promoting science and art. This chosen few must, as a part of the exercise of their trust, choose their successors; conferring on others rights which themselves have received as nominees. For how can a popular elector confer what he does not possess, and with what show of modesty prescribe a higher and more comprehensive interest in a science than himself can pretend to? Such were his arguments! Time has answered them. The Council of such a College as the College of Surgeons, if fit for anything, is to educate and create an adequate constituency. It is curious, too, to see how Green's arguments for the exclusion of country Surgeons from the Council are turned against himself by the railroad and telegraph. One thing, however, is certain, and that is, that Green did his best to raise the education and position of his brethren, and that the order of Fellowship at the College of Surgeons, and the institution of a General Medical Council, were foreseen by him thirty years ago; just as he likewise advocated the common education of Physicians and Surgeons, on the ground of the unity of the science, and reminded the College of Physicians that, had they acted up to their Charter, and enforced their rights and duties as regards Surgery, the College of Surgeons could never have existed. (b)

It remains to say one rough and hasty word on that system of philosophy which Green derived from Coleridge, and pursued in common with him; which he promulgated in his Hunterian Orations; to which he owed much of his characteristic elevation of sentiment, and the defects of which account for such of his own as we have ventured to indicate. There are (to put the matter in a popular light) two possible sources of knowledge: one, the collection of facts from without; the other, the workings of the mind within. We hold each to be necessary, and hold in reverence each in its proper sphere. The one *collects* facts; the other aims at discovering laws. Undoubtedly, the discovery of law is the higher, so far as it is attainable. From *fact*, man may assert that So it IS. From *law*, he can assert that So, and no otherwise, it MUST be. The discovery of the laws of nature—the forms and measures which God has prescribed to his own working—is the highest privilege of Man;—it is the end of induction. But how? Does the knowledge of law flow, of course, from the observation of facts, however accurate and minute? Certainly not. Thousands of persons noticed the swelling of the veins after ligature of a limb before Harvey discovered the circulation; thousands of apples had fallen, pendulums had swung, chemical combinations had been effected in exact measure and weight, iron nails had been heated to redness by the hammer, wood ignited by friction, ere the laws of gravitation, attraction, atomic proportion, of motion as the source of heat, and of the unity of Force, had been seen by the philosopher. "If Lord Bacon," argues Mr. Green, "requires in order to the interpretation of Nature that man should know and apprehend by *the light of reason* the import of sensuous facts as the signatures and impressions of divine Ideas, we may safely affirm that the Induction, which Lord Bacon proposed, though forming the steps to the needful vantage-ground for the *inquisitio formarum, quæ sunt ratione certa et suâ lege æternæ et immobiles*, had in truth for its final object the discovery of those Ideas, which as Laws of Nature are the impress of the Creator's power and wisdom, and as such are necessarily somewhat other and more than the mental substantiation of facts, under whatever degree of generality."

"Again," continued Mr. Green, "does the history of the grand discoveries of science offer any sufficient evidence that they were only the result of a laborious collection of facts and observation of particulars?" Not at all. Mere observation of fact and laborious induction led to the Jewish notion of a firmament, to the Ptolemaic system of 'cycles and epicycles," to doctrines of phlogiston, and the like. On the contrary, "the discovery of any great law of nature has uniformly the character of felicity, and *of a revelation, as by a flash of Divine light, of the legislative wisdom of the Creator*."

Now, the discovery of law is the appanage of genius, and genius is a gift. But the gift uncultivated is fruitless, and due cultivation will impart to the commonest mind something of "that healthy balance and proportionate development of the essentially human powers and faculties" which is the characteristic of genius. The means thereto is Liberal Education. Thus, although Green, if his teaching were not duly corrected, and were taken without the qualifications which himself imposed, might lead his disciples to an undue exaltation of the work of reflection above observation; and might lead them to trust in *à priori* laws —like the pathological laws of Hunter—which really have no *prius* to rest upon, and might induce them to that kind of rationalistic perversion, which would bleed men to death because it was the rule "based on acknowledged pathological principles"—yet it would be wrong to accuse him of merely begetting dreamers. He, like Sir Joshua Reynolds, showed the nothingness of genius without labour; he never failed to enforce due observation and experiment; and he supplied to those who, in the mad Reform age, were sinking into a vile materialism, and a still viler utilitarianism, an insight into a nobler philosophy, which takes for its first axiom, that God is the maker and ruler of all things visible and invisible.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The Library will be closed on Friday and Saturday, the 25th and 26th of December.

(b) "Distinction without Separation. A Letter to the President of the Royal College of Surgeons on the Present State of the Profession, by Joseph Henry Green. London. 1831."

THE CRAWLEY COURT-MARTIAL.

(*From a Correspondent.*)

I CAN well understand your reasons for abstaining from entering upon the subject of the court-martial now pending. It would not be just on your part to anticipate conclusions which the evidence when complete might not warrant. My object is to show that much is to be said in favour of the Surgeons, who, as yet, have had no opportunity of exculpating themselves from the implied charges brought against them.

In the succeeding remarks it has been my object to avoid prejudging Lieutenant-Colonel Crawley in any way.

So far as the present inquiry has proceeded there seems to have been one fact established, viz., that such orders were given for the close arrest of Sergeant-Major Lilley—orders that "the sentries were not to lose sight of him by night or day"—as to have led to the presence of an armed soldier continually within the sergeant-major's bungalow.

Now, about the death of that sergeant-major by "heat apoplexy." What might have been the exact nature of the disease of which Sergeant-Major Lilley died—whether it were "heat," or any other form of apoplexy, cr whether it were an epileptiform seizure—we have no means of ascertaining from the Medical history of his case. The opinion of the attending Medical officer was, that the cause of death was heat apoplexy; at any rate the symptoms preceding that event were apoplectic symptoms. In the first place we may take it for granted that this was a perfectly unexpected and unforeseen event. Mrs. Lilley's letter and the evidence of Assistant-Surgeon Barnett alike prove this. The causes which led to it were then arrived at after the fact. It appears that Assistant-Surgeon Barnett never made any representations to Lieutenant-Colonel Crawley or his family about the Sergeant-Major and Mrs. Lilley, because "There was a mutual silence between myself and Colonel Crawley and the members of his family in reference to all matters respecting the court-martial then going on in regard to the sergeant-majors arrested. I considered it my duty to observe a strict silence on those matters. It was my wish to be on good terms with all the officers of the regiment, and had I become a partizan of Colonel Crawley or Paymaster Smales I should not have succeeded in doing so."

He represented, however, all the circumstances connected with the confinement of the sergeant-major, and the inconvenience caused by the sentry. It was, also, upon his representation to Surgeon Turnbull, that exercise was allowed to the three sergeant-majors in arrest on April 29.

Had there been no other elements in the case than these—that a large plethoric man (eighteen stone), accustomed to regular and active exercise, was confined for a very protracted period during the hot season in India within the walls of his bungalow, and taking only two hours' exercise per diem in the presence of an armed sentry—that this man was, and had been suffering great anxiety and tension of mind from various family afflictions, in addition to such as would necessarily arise out his arrest—then there can be little doubt that these would be admirably adapted to induce an attack of "heat apoplexy;" but a factor—of primary importance in the eyes of Colonel Crawley, of course, and of great weight with everybody—is introduced in *alcohol.*

Whatever might have been Lilley's previous habits, it seems to be allowed that he did consume spirits daily during his arrest. The parties are dead, and we shall never know now whether this unfortunate man habitually consumed a large amount of alcoholic stimulants, although short of actual intoxication, or whether this was a habit contracted during his arrest, and to which he was driven under the influence of mental and physical depression. The evidence brought before the court-martial on this head is both contradictory and unsatisfactory. But, admitting that he did drink during his arrest, the question of the degree and importance which alcohol holds as a cause naturally becomes a point of much interest. Colonel Crawley will allege it as the principal, if not the only cause: the prosecution, on the other hand, regard it as one among an assembly of causes or antecedents, or as modifying the action of these. As we have already said, if a man of Lilley's description were exposed to the conditions to which he was exposed, these might have been, and doubtless were, sufficient to have rendered an attack of apoplexy very likely. On the other hand, hard drinking—whether as a habit, or as a recently-acquired custom—would, in itself, in an Indian climate, be a very probable cause of his attack and its fatal issue. Inasmuch as there is no evidence of the exact amount of liquor consumed by Lilley,—for the Medical officers admit that the use of the word "considerable" in their addendum should not have been used,—and as there is an absence of evidence of any of the symptoms suggestive of alcoholism, we are left in great doubt as to how far drink, and drink only, was the cause of his attack.

Before we proceed to Surgeon Turnbull's evidence, I cannot forbear directing attention to the following:—In answer to the question by Colonel Crawley, "Have you not stated, as your ground for not mentioning the subject to me, that, if a soldier commits a crime which justifies his being kept in close arrest, although that confinement might, from unforeseen circumstances, cause his death, you did not think it the duty of a Medical officer to volunteer an opinion which would even seem to frustrate the carrying out of the orders of his commanding officer, or which would seem to interfere with the exercise of discipline?" Assistant-Surgeon Barnett replies, "I believe I have made such a statement."

This question is sufficiently indefinite, certainly, and deals only with possibilities. If it be meant by the words "might, from unforeseen circumstances," possibly cause his death, then a Medical officer is doubtless justified in assenting to that. Still, it is to be regretted that Assistant-Surgeon Barnett did not make his limits and position very plain, because a Surgeon's duty is, first of all, to his patient, and to those whose health has been placed under his care. A Medical officer need not, to borrow the curious expression of Sir William Mansfield, "compass his sanitary measures out of harmony with his commanding officer." There need be no subversion of discipline at all. The Medical officer is bound to state plainly and respectfully his views upon the probable results which will accrue from any given course, to the powers that be, and with them rests the whole responsibility of attending or not to his remarks; but it is clearly his duty to make them. A love and respect of discipline cannot occupy a position above that of the physical welfare of the troops under a Surgeon's charge. No one can say that Lilley's death could have been foretold, of course; but his loss of health from the circumstances under which he was placed—yes. And the Medical officers, looking back on the facts, themselves urge these as the causes of his death.

Let us now come to the evidence of Surgeon Turnbull. It is probable that a Medical officer was never before placed in so awkward or responsible position. The length and severity of his cross-examination have been such as would have led to the inference that the Surgeon's conduct was being investigated by the court instead of Lieutenant-Colonel Crawley's.

Let me try to make some points clear to the comprehension of the non-military reader, but of which Lieutenant-Colonel Crawley must have been well aware:—

1. When a soldier is made a prisoner, he is taken to the Hospital and Medically inspected by the Surgeon; (a) then he goes before the commanding officer, and is "put back" for a court-martial; he is marched, under ordinary circumstances, to the Hospital daily for inspection, and immediately before his court-martial he is Medically examined, and certified to be "fit" or "unfit" for certain punishments; after his trial, he is again seen by a Medical officer, before the punishment awarded is carried out. Should the prisoner be a private he is retained during all this time in the guard-room; if a non-commissioned officer, he is kept in his quarters; and if the arrest be called "close" arrest, a sentry is placed over his door,—outside it.

2. It forms no part of the duty of a Surgeon to visit any healthy prisoner, either at the guard-room or in his quarters, except as a part of the regiment under his care.

3. A sick soldier under all circumstances is brought to the Hospital. The custom is this:—Supposing the illness to be trivial, and such as a few remedial measures and a short rest will overcome, the man is "retained" in Hospital under observation, but is not admitted, in the sense that his name is entered in the official Medical records. Should, however,

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(a) Extract from Army Medical Regulations, page 87, paragraph 17:—"*All prisoners*, prior to being brought before the commanding officer, should be taken to the Hospital at the morning visit of the same day, to be inspected by the Surgeon, who will certify their state of health to the commanding officer."

Extract from Queen's Regulations, page 251, paragraph 16 (pocket edition):—"A certificate, in the handwriting of the Medical officer, according to a prescribed form, showing the state of health of the prisoner, and whether he has or has not been marked D, is invariably to be attached to the proceedings" of a court-martial.

the man's case, at first or subsequently, prove such as to require Hospital diet and treatment, he is then officially admitted, his name is entered in the admission and discharge book, and he is upon Hospital rations, and pays Hospital stoppages; so that, in either case, he is admitted within the walls of the Hospital, but under the former the terms "retained," "on observation," "Hospital for the day," are used to designate such admission.

4. One or more case books are kept in every Hospital, into which the names and cases in detail of the men treated are entered, if articles of extra diet are given, or the disease be acute, dangerous, or noteworthy in character; but it is not required, nor is it customary, for every admission into Hospital to be recorded in the case book, though every patient's name must appear, in the admission and discharge book, upon the diet rolls, and upon a Medical history sheet, which latter affords a brief *résumé* of the Medical history of every soldier in all regiments.

5. Suppose a case to be retained in Hospital for a day or two on observation, and then to be admitted as a patient, the date of such admission is the day on which he receives diet, and upon which he is liable to Hospital stoppages. In the official form used in the admission and discharge book of Army Hospitals there are separate columns for the date of attack or injury and the date of admission into Hospital. If, then, in entering his name in the Medical case book, the last date be affixed in the margin, a reference is made in the details to the actual date of his coming under Medical observation for his disease, or that date may be used for the description of his Medical case only, and another day for his diet and Hospital stoppages.

6. Supposing a non-commissioned officer to be confined as a prisoner to his quarters, it is to be presumed, as it is in accordance with the custom of the service, that the date of his trial will be fixed in a few days. If this be departed from, and delay takes place, the Medical officer then, at his discretion, recommends such exercise as he deems fit.

7. All Medical records, save the case books and Medical history sheets, are forwarded at the end of the year to the Director-General or head quarters' office at the station.

Now, let us trace Surgeon Turnbull's course by the light of these facts. The course adopted by the military authorities was very unusual. Sergeant-Major Lilley was not marched to Hospital for Medical inspection at all, as he should have been. Next, the Surgeon sees him in his quarters—which he is not required to do, particularly where the Assistant-Surgeon must be seeing him daily—and, finding that he is not brought to trial, he recommends, on the fourth day of his arrest, that the sergeant-major be granted exercise; but it is not usual or necessary to make any special request under other and ordinary circumstances, for the short confinement between the date of his being placed in arrest and brought to trial needs no report being made. Hence, it follows that, so far, Surgeon Turnbull pursued the usual and perfectly correct course, while the military authorities deviated from the rules and customs of the service. The protracted period during which these sergeants were kept under arrest, without any specific charges being preferred against them, was a ground of complaint not investigated by the court. It will be seen how Lieutenant-Colonel Crawley took advantage of a play upon words to confound the Medical witnesses, viz., the use of "admission" in two different senses, although he must have known perfectly that, without explanation, this involved them in an apparent contradiction.

The Case Book.—Surgeon Turnbull's evidence, read by the light of the above remarks, is quite intelligible. On the question of the "consecutive" entry of cases according to their dates, the lieutenant-colonel fell into a very pretty mare's nest. The case of Sergeant-Major Wakefield was not consecutive. The explanation is very simple. A soldier's name is entered at the head of a page; but let us suppose his case only occupies a few lines, and he is discharged. For economising space, another patient's case, of a different date, may appear on the same page. Let us further suppose that the heading at the top of the page is one of a case which will probably occupy many pages; one, two, or three of these, perhaps, are left vacant, and the next case, in point of date, is entered as many pages on. Now, if the whole of the interval has not been required, then the unoccupied part is filled in with the name and details of another man coming under treatment at a later date. Mr. Turnbull proved that the case of Sergeant-Major Wakefield was not a solitary non-consecutive one, and so "closed up" that apparent discrepancy.

In the admission and discharge book the entries must be so consecutive, however. The discrepancy in dates (*i.e.*, the erasure) can be easily explained. Sergeant-Major Wakefield is retained in Hospital from the 25th to 28th May, but *not* dieted as a patient. On June 5 he is admitted into Hospital as a patient on diet; and, in recording his case, the former date is first used, and then erased for the latter.

Surgeon Turnbull is required to furnish the details of a case of this sergeant, who was not (in May) admitted on diet, but only temporarily retained in Hospital. He was not required by the Medical regulations to enter such case at all, and a whole year had elapsed since its occurrence, so he wrote one from his private notes, and had it copied in the case book in ignorance of having really entered Surgeon-Major Wakefield's case—on his admission in June—in a case book which he found two days afterwards, and he went with it to the colonel, explaining the circumstances. Had he given no explanation of this, it is plain that the appearances were in favour of his having trumped up a fictitious case from memory against his colonel! Great stress has been laid upon two points—

1st. That Surgeon Turnbull did not know of Sergeant-Major Lilley's habits, which he ought to have done, and that he was alleging a host of predisposing or exciting causes to Lilley's fatal attack, leaving out one of the most important elements.

2nd. That he did not himself attend the sergeant-major.

With regard to the first, it may be said that Mr. Turnbull could not know! How was he? There was no evidence of intemperance from Lilley's character, appearance, or symptoms, as observed by Assistant-Surgeon Barnett, or by any one else, within Mr. Turnbull's knowledge. As there was an absence of anything and everything to give rise to suspicion—as Lilley was only ill twenty hours—and as the Medical officers knew nothing of the amount of alcohol consumed until Lieutenant-Colonel Crawley told Assistant-Surgeon Barnett of it—as the other circumstances were (*per se*) sufficient to have caused Lilley's illness, Mr. Turnbull was quite warranted in writing the report he did on June 7—he could write no other. He was equally right (in justice to his colonel) in modifying that report on June 9; but he erred—and this was most unfortunate—in stating, in his addendum, that Lilley daily consumed considerable quantities of alcohol during his arrest. In framing this addendum the amount of liquor consumed should have been determined with some accuracy, and, if this could not be done, it should have been worded accordingly. As, however, Assistant-Surgeon Barnett has frankly confessed this was his fault, no more can be said than that it led to very serious misapprehensions. If Lilley were habitually a "drinker," but was in his ordinary health at all other times, except at the close of his arrest by death, then drink could not have been *the* cause—but, at most, only *a* cause—which proved effective under the circumstances connected with his arrest and preceding his death. If Lilley only drank hard during his arrest, how were the Medical officers to guess it without any evidence to lead them to it? Surgeon Turnbull was quite justified in refusing to alter his report of the 7th, on the *dictum* of his colonel alone, until he had other reasons, which, when they came to him, he acted on.

On the other hand, Colonel Crawley made use of his information—somehow or other obtained, because we can quite understand that it was very essential to Colonel Crawley's reputation to account for poor Lilley's death by some other means than such as appearances suggested, but this was in nowise operating upon the mind of his Surgeon—in a shrewd and disingenuous way, for he furnishes it to the general with his Surgeon's report of the 7th, returning Mr. Turnbull his addendum of the 9th as unnecessary; and thus, in vulgar parlance, stealing a march on his Surgeon, and doing him grievous damage in the eyes of the military authorities.

2. It is unfortunate that Surgeon Turnbull did not see Lilley during his illness; but no blame whatever can be attached to him for this, inasmuch as he was never apprised of it. His Assistant-Surgeon was in attendance, and Lilley was only ill about twenty hours, and of that time he was dangerously ill only for the few hours preceding his death at 2 a.m.

It is to be hoped that the lesson which this court-martial teaches will not be lost upon any Medical officer. No doubt it is a very troublesome and irksome duty, but everything must be in writing, and of everything must copies be preserved; and a Medical officer must not shrink from exercising, with all care and diligence, the powers given to him by the Army Medical Regulations. It may be that, in acting according to the very letter of the Regulations, a man does so at the risk of some personal discomfort to himself—at the risk, too, of his reputation for subordination with the executive and military authorities; but it must be done; for no personal motives about keeping clear of partizanship in order to maintain the friendship of all, or considerations for the feelings or character of his commanding officer, will stand the test of public investigation.

Two conclusions must have forced themselves upon every one who has followed the course of this court-martial, viz.:—1. That the statements put forth in Parliament and by the public press have been exaggerated and garbled statements; 2. That the spectacle of the internal condition, organisation, and discipline of the 6th Dragoons, with which the public have been edified, is one of which no regiment could have reason to be proud.

REVIEWS.

The Science and Practice of Medicine. By W. Aitken, M.D., Professor of Pathology in the Army Medical School. In Two Volumes. Second Edition, revised and re-written. London: Griffin. 1863.

Five years have elapsed since we had the pleasure of reading the first edition of this work, then in the form of a modest handbook, but now expanded into two large and handsome volumes. We stated then that it contained the newest and best information in a condensed form to be found on the subjects treated, and recommended it to our readers as an admirable companion to the classic Lectures of Watson—even as a substitute for those charming volumes to men of limited means. We will now ask our readers to accompany us as we turn over the leaves of this new edition, and take rather the cursory glance of the reviewer at a standard work in a new dress, than make the careful examination which a new work or an untried author would call for.

On casting the eye over the prefaces and table of contents we see at once that the author has not materially altered the general scheme of his work, but by a careful revision, by re-writing many parts, by the addition of numerous topics of importance, especially relative to the treatment and prevention of disease, and by the description of diseases omitted in the former edition, he has rendered the work more deserving of the confidence of the Student of Medicine and of the Profession.

The want which the work was originally designed to supply has been more fully met in the present edition, the author having supplied us with a text-book for students, *following a systematic arrangement*, which would give them a consistent view of the main facts, doctrines, and practice of medicine, in accordance with the present state of the science. In its system, in its scope, and in its method of dealing with the subjects treated, this work differs from all other text-books on the science of Medicine in the English language. The several sections composing the introductory portion of the former edition have been expanded by important topics, and deal with the Science of Medicine introductory to the succeeding parts. Here we find, in the section on fever, valuable information relative to the use of the thermometer as a means of clinical diagnosis. Data are given relative to the temperature of the body as a guide in such methods of diagnosis; the signification of the varying temperature in fever is fully explained; and practical rules are given as a guide to the regular and continuous determination of temperature in febrile disease.

In another section a full account is given of the degeneration of tissue, embracing the fatty, the mineral, the pigmental, and the amyloid; and the first part of the work is concluded by a chapter on the principles which dictate the treatment of fever and inflammation.

In the second part of the work—which treats of Nosology—the definitions of diseases, or rather the principles upon which they may be defined, their nomenclature and classification, are severally considered. The principles on which diseases have been classified are detailed, and sufficiently cogent reasons are assigned why the nomenclature and classification, embodied in the records of the Registrar-General and those of the Army Medical Department, ought provisionally to be accepted in the present state of the science. At the same time, the imperfections of Dr. Farr's system of classification are clearly indicated, both as regards its scientific usefulness, as well as the difficulties in its application to the wants of civil and military life.

"Although still adopting in the main, therefore, the nomenclature and classification used by the Registrar-General and the Army Medical Department, yet there are some diseases (such, for example, as rheumatism, chronic Bright's disease, diabetes mellitus, and the like) whose pathology now forbids their being considered in the place where they are respectively found in that classification; but otherwise, for the reasons stated in Part II. (and especially between pages 169 to 174), that nomenclature and classification have both been retained as the fundamental part of the system on which the arrangement of the text-book is based."

In the third part of the work—which treats of the nature of diseases, especial pathology, and therapeutics—we observe two especially important chapters, namely, one on the nature of endemic, epidemic, and *pandemic* influences, in which the propagation of diseases of continuous succession is described, and in which the question as to the spontaneous origin of diseases is discussed at length. Another important chapter is on "The Management of Epidemics, and the Proceedings which are advisable to be taken in places attacked or threatened by Epidemic Diseases."

In this part of the work diagrams illustrative of the typical ranges of temperature in febrile diseases are given for the first time in a text-book:—

"The author has been induced to do this from a belief in the great practical importance of the subject, and in the hope that it may lead those who have opportunities for original observation to add to our knowledge of febrile diseases in this direction. These diagrams have been introduced advisedly, after consultation with one who has had great experience as a clinical teacher, and for whose opinion the author entertains a most profound respect."

Such diagrams have been introduced in every case where the typical ranges of temperature in the respective diseases have been determined and confirmed by several different observers, among whom the names of Wunderlich, Traube, and Sidney Ringer stand prominently forward. The following are the principal morbid states in which the ranges of temperature are fully described and so illustrated:—

Small-pox (natural and modified), measles, scarlet fever, erysipelas, typhoid fever, typhus, malarious fevers, rheumatism, pneumonia, acute tuberculosis, and pyæmia.

Much new matter is given under the topics of small-pox, cow-pox, and vaccination. A short and interesting history of the specific distinctions between typhus and typhoid fever is to be found at page 373 of the first volume, where the author recants the doctrine he taught in the first edition relative to the identity of these diseases. Much new matter is given, under the head of morbid anatomy of typhoid fever, and the modes in which the specific typhoid material is eliminated from the intestinal glands.—Page 396.

An account of malignant pustule and of syphilis is given amongst enthetic diseases. The nature of the syphilitic poison and of the infecting sores is very fully described. Distinct and definite nomenclature is especially insisted upon. Hints are given for the investigation and description of syphilitic ulcers. The nature and history of the doctrine of syphilisation, as well as the process of syphilisation, are considered; and the development of the syphilitic *node* in different tissues and organs is described.

A short chapter on the pathology of acute, specific, or general diseases completes the contents of the First Volume.

The Second Volume commences with an account of dietic diseases, and valuable tables are given for determining the nutritive values of food in dietaries. The description of *scurvy* has been rewritten; and the account of *Embriositas, Goitre, Cretinism*, and paralysis of the lower limbs from the use of the *Lathyrus Sativus*, are topics new to this edition.

A very full account is given of the nature of the Parasites (animal as well as vegetable) which are associated with diseases upon or within the body of man. This part is amply illustrated by woodcuts, which must greatly aid the student in comprehending this class of obscure diseases.

Amongst constitutional diseases, *Beriberi, Chronic Bright's disease, Diabetes Mellitus, and Spasmodic Asthma*, are new to this volume, and are considered under this head in accordance with what is at present known regarding the pathology of these diseases.

The accounts of the local diseases have been greatly amplified, and in treating of them short sections relative to the main points to be attended to in clinical diagnosis are given with the chapters which treat of each class of these diseases. These sections must prove of great use to the clinical student; for they indicate the best methods of investigating the nature of the diseases in the course of which lesions tend to be localised. The chapter on insanity has been rewritten, and there is an interesting account of that obscure disease "insolatio," so fatal to our soldiers in India. In these chapters and sections, woodcuts have been introduced wherever it was thought they would render the descriptions in the text more intelligible.

The last part, on the geographical distribution of disease, has also been enriched with much new material. The volumes are printed on paper of a yellowish tone, not because it has recently been the fashion to "get up" books on "toned" paper, but because, agreeably to sound ophthalmic doctrines, as set forth in the second volume of the *Ophthalmic Reports* (p. 117 and 120), such paper is less fatiguing to the reader than white paper, and does not tend to impair sight. We are also glad to see another very necessary reform in "getting up" accepted by our author—he has made his binder spare us the trouble of using the paper-knife.

After saying so much, it must be quite unnecessary to add that we most strongly recommend Dr. Aitken's work to every Student and Practitioner of Medicine. Science and Practice are as happily blended in these pages as they always should be in our Study and Treatment of Disease.

GENERAL CORRESPONDENCE.

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GEORGE TOWNLEY—THE PLEA OF INSANITY.

Letter from Dr. Forbes Winslow.

[To the Editor of the Medical Times and Gazette.]

Sir,—May I be permitted to state, in reference to the evidence I gave at Derby in the case of George Townley, that I pronounced no opinon as to his insanity on August 21, the day he committed the murder?

Having, as I thought, recognised, in common with Mr. Gisborne, the Surgeon of the prison, and Mr. Sims, the Governor of the gaol, mental derangement on November 18 and on the 10th inst., I said, in reply to a question put by Mr. Macaulay—"Assuming the prisoner to have been in the same state of mind on August 21 that he was at the time of my two examinations of him in the Derby County Gaol, I was of opinion that he was then—as he is now—deranged in his intellect, and was, consequently, legally irresponsible."

I purposely avoided propounding any speculative opinions on the subject of his alleged insanity at the time of the murder, rigidly adhering to a statement of facts observed by myself.

In the course of my analysis of Mr. Townley's state of mind, I could not altogether set aside his singularly perverted views on the subject of religion; but I carefully avoided all misconception on the subject, by stating in my written opinion "that it would be most unphilosophical to infer the existence of insanity from the theological views of the prisoner or any other person."

I distinctly referred in my evidence to the prisoner's intellectual delusions, as contradistinguished from what may be termed his moral perversion.

He informed me that he killed Miss Goodwin in order to "recover" and "repossess" himself of property that had been illegally wrested from him by an act of violence. He was perfectly unable to appreciate the absurdity of this idea.

If a man were to throw a sovereign into the Thames, and, on being asked why he did it, were to reply, "that his object was to 'recover' and 'repossess' himself of the twenty shillings" thus lost to him for ever, would he, if he persisted in this assertion, be considered of sane intellect?

As an additional proof of his intellectual derangement, I alluded in my evidence to his insane belief in the existence of a conspiracy against him, consisting of six persons, with a chief at their head.

Mr. Baron Martin, in his charge to the jury, pointedly alluded to this delusion, and remarked that it frequently existed among insane persons.—I am, &c.

Forbes Winslow, M.D.

Cavendish-square, December 16, 1863.

ROYAL MEDICAL BENEVOLENT COLLEGE.

Letter from Mr. W. B. Kesteven.

[To the Editor of the Medical Times and Gazette.]

Sir,—That those members of the Profession who are interested in a reduction of the charge for exhibitioners at the above College to "a sum not exceeding £30 per annum," may know that a matter of such high importance has not been lost sight of, I beg the insertion of the following correspondence between the Council of the College and the Committee of Governors appointed to endeavour to regain for the exhibitioners all the advantages originally promised, and for a short time given to them. It is necessary to explain that agitation upon this subject has been stayed for three years, in answer to a request publicly made by the treasurer, that time should be given to enlarge and complete the school buildings before such a change could be carried out.

We have reason to hope that a plan is now being considered by the Council for remedying their failure in carrying out the exhibitioners' part of the school, — a failure noticed, I may add, by yourself in your valuable Leaders dated January 25 and May 20, 1862. I am, &c.

W. B. Kesteven.

1, Manor-road, Upper Holloway, December 3.

"*To the Council of the Royal Medical Benevolent College.*

"Gentlemen,—The Exhibitioners' Committee, representing as it does a body of Governors of the Royal Medical Benevolent College, who are dissatisfied with the charge now made for exhibitioners, are fully convinced that, taking into consideration the promise publicly made by Mr. Propert, together with the present improved circumstances of the College, that the time has arrived when the Council may carry out the original objects of the school.

"It must be admitted that each department of the College was designed for the poorer members of the Profession, and that a moral obligation still rests upon the Council to supply 'an education of a high character, conducted by clergymen of the Church of England, for £25 a-year, exclusive of the cost of books,' inasmuch as a large sum of money was subscribed by the public for that purpose.

"Guided by the advice of the Attorney-General the Exhibitioners' Committee holds that the Council were *not compelled* by the Act of Incorporation to increase the charge, and they now propose to submit their case and Sir Roundell Palmer's opinion thereon for the consideration of Lord Chelmsford, the President of the College, if the Council will on their part also submit to his Lordship the case and opinion which favours their view of the legal part of the question. This proposition, and the fact that the Exhibitioners' Committee has, at the request of Mr. Propert, suspended all agitation upon a question of vital importance for three years, affords a convincing proof that the Committee does not desire to harass the Council by pressing impossible questions upon their attention.

"From careful calculations the Committee is convinced that an independent Institution might be formed in which it would be possible to give the sons of Medical men a good commercial education for £25 a-year, and a classical education for £35, provided a moderate number of lay scholars were admitted to the lower school at a charge of £45, and to the upper school at a charge of £55; the addition of lay scholars being regarded as a benefit to a school otherwise composed of boys derived from one particular profession.

"The Exhibitioners' Committee again assure the Council that its desire has always been to co-operate with them in carrying out one of the main objects for which the College was founded.

"The Exhibitioners' Committee will be obliged if the Council of the Royal Medical Benevolent College will give a decisive answer as to whether at any definite period the School will be opened to the sons of the poorer class of Medical men at the sum originally charged.

"I am, gentlemen, your obedient servant,

"W. B. Kesteven,

"Honorary Secretary to the Exhibitioners' Committee.

"1, Manor-road, Upper Holloway, June 16, 1863."

"Royal Medical Benevolent College, Epsom,
"Office: 37, Soho-Square, London, W.
"October 22, 1863.

"Sir,—I am directed to inform you that the Committee appointed by the Council of the Royal Medical Benevolent College to inquire into the actual cost to the College of each exhibitioner, have reported to the Council that they find, as the result of very careful calculations, that at the present time each exhibitioner is costing the institution £40 1s. 9d. per annum.

"I am directed to add that, while it is the opinion of the Council that this report would not justify any immediate reduction of the charge for the education of exhibitioners, the Council are considering the expediency of adopting changes which may eventually enable a certain number of scholars to be admitted at a lower rate than is at present paid by exhibitioners. "I am, Sir,
"Your very obedient servant,
"W. B. Kesteven, Esq." "Robert Freeman, Sec.*

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, December 8.

Mr. Partridge, President, in the Chair.

A paper, by Mr. Charles H. Moore, was read on

SOME UNUSUAL OCCURRENCES DURING THE CURE OF A POPLITEAL ANEURISM.

The aneurism was in the calf, under cover of the gastrocnemius. It was as large as the fist, and had been observed four weeks. From the shape of the tumour, and the greater force of its beat externally, it appeared probable that the opening was on the outer side of the artery. The extent of its alternate dilatation and recoil showed that the opening was a large one. The patient, an athletic man, aged forty, had a wide arcus senilis and an audible roughness produced by the current of blood in the aorta. Genuflexion was first employed, and the beat of the aneurism was kept somewhat reduced for eight days. A tourniquet was also applied to the groin by day, and the hip flexed by night. A little diminution took place in the size of the aneurism, but the bending of the knee caused such intense pain in the sole of the foot that it could never be long continued at any angle which materially lessened the arterial impulse. That plan of treatment was accordingly abandoned. Compression of the femoral artery by two tourniquets, tightened alternately, was next made, and was continued twenty-five days. During the greater part of the same period the patient took an ounce and a-half of iodide of potassium. At the end of the time mentioned the aneurism beat less, was half full of solid substance, and was larger than before; the veins of the leg were distended, the skin dusky, the tissues œdematous, and the beat of the artery on the foot imperceptible. On the next day the skin was of a bright pink colour and of high temperature, and some collateral vessels were enlarged. The aneurism seemed to be near its cure. On the twenty-seventh day of the treatment by compression sudden severe pain struck the aneurism, which was over in two minutes. The feeling at once returned in the foot, which had been painful and benumbed; and the tumour was found to have fallen in at the highest part between the heads of the gastrocnemius. The veins returned to their natural size, the artery beat again on the instep, and the enlarged collateral arteries disappeared. The hope of an imminent cure was gone. Compression was continued for three weeks longer, and the aneurism improved, but it advanced so slowly that digital compression was resorted to. It was employed occasionally for three days with manifest advantage, and a day without any pressure was accordingly allowed for the skin to recover itself. Digital compression was then made for thirty-five hours, except at intervals of two hours, when a tourniquet was tightened for half an hour. After fourteen hours' rest the femoral artery was again pressed with the fingers for twelve hours, and at the end of that time the aneurism was found to be pulseless and firm. In thirteen hours it beat again, but an hour and a-half's effective pressure stopped it finally. The author remarked that genuflexion was inapplicable in this case on account of the pressure which happened to be made upon the posterior tibial nerve by the aneurism in that posture of the limb. He thought it not unlikely that the iodide of potassium might have facilitated the deposition of fibrin in the sac during the seventeen days in which it was taken; but he attributed to that medicine a mischievous acceleration of the pulse, which, by keeping the aneurismal sac constantly tense, occasioned its enlargement. He added some observations upon the varying condition of the aneurism, according as the pulse was quick or slow; as well as upon the different kinds and sources of pain in the case; which observations might be of service in the study of internal aneurisms. The remarkable interruption of the cure he assigned to the detachment of a portion of the fibrin in the aneurism from a situation in which it had previously compressed the nerve, artery, and vein. Upon the removal of this pressure, and the restoration of the current of blood to its natural channels, the enlarged collateral arteries had subsided.

A paper, by Mr. Arthur E. Durham, was read on a

CASE OF POPLITEAL ANEURISM, SUCCESSFULLY TREATED BY FLEXION OF THE KNEE.

E. P., a pale, unhealthy-looking man, 31 years of age, was admitted into Guy's Hospital, under the care of Mr. Durham, on August 5, 1863. The patient was suffering severely from an aneurism in the right popliteal space, the first symptoms of which had manifested themselves ten or twelve weeks previously. The aneurism was about as large as an orange, firm to the touch, and not easily emptied to any extent by manipulation. Pulsation was very distinct, and the characteristic aneurismal bruit could be clearly heard by means of the stethoscope. When the knee was bent as far as expedient, pulsation in the tibial arteries could be scarcely felt. The case appearing in many respects a favourable one, it was resolved to try Mr. Ernest Hart's method of treatment by flexion. Accordingly, on the 7th, the limb was bandaged, flexed, and supported by pillows in the manner recommended by Mr. Hart. Each succeeding day a fresh roller was applied over those already on the limb, and the degree of flexion somewhat increased. On the 11th the bandages were removed, and the aneurism examined. No pulsation could be felt; but on making deep pressure, a slight thrill was just perceptible. The limb was again flexed and re-bandaged. The next day (that is, the fifth from the commencement of the treatment) neither pulsation nor thrill could be felt or bruit heard. The aneurism was, in fact, cured. It gradually diminished in size, and the patient got about comfortably in the course of two or three weeks. He left the Hospital on August 28. During the treatment the patient took every three or four hours a draught containing tincture of opium, tincture of digitalis, and hydrocyanic acid, with manifest good effect.

A paper, by Mr. Ernest Hart, was read on a

CASE OF POPLITEAL ANEURISM CURED BY FLEXION OF THE KNEE (BY THE LATE MR. H. C. JOHNSON).

Mr. H. C. Johnson, the late much esteemed and lamented friend of the author, had communicated to him more than a year since some details of a case of popliteal aneurism in which he had effected a cure by forcible flexion of the knee, carried out in the manner which proved successful in the first case which Mr. Hart communicated to the Society. The circumstances under which the cure was effected were somewhat peculiar, and Mr. Johnson had intended to bring forward a statement of the case. That intention having been unhappily frustrated, and as he had already authorised Mr. Hart to make use of the case, it was thought desirable briefly to record it, as a pendant to Mr. Durham's case. The patient was an adult male, admitted into St. George's Hospital under Mr. Johnson's care, with a popliteal aneurism of moderate size, and of a few months' duration. He employed pressure with tourniquets for nearly three months, but ineffectually, and was on the point of proceeding to ligature when flexion was suggested. He bandaged the leg to the thigh, including the whole foot and leg in the bandage, as it was best, the author thought, to do, and the result was consolidation in six days. The cure was permanent. The previous failure of compression made this case very interesting, and recalled that in which Mr. Spence, of Edinburgh, found flexion successful in curing a relapsing popliteal aneurism, which had recurred after ligature of the femoral at Scarpa's triangle, where the two unpromising alternatives were the ligature of the iliac under these peculiarly unfavourable conditions, or the old operation of Antyllus, of which the mortality in that region had been very great. The cases brought forward on the present occasion (the author remarked) raised to twelve the number of cures of popliteal aneurism effected by British Surgeons since September, 1858, the date of his first case.

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* It is admitted by the Council that every scholar is legally entitled to be rent-free. Under these conditions the prime cost of each ought not to be £40 1s. 9d. There is reason to believe that expenses belonging to another department of the College have been unfairly included in this estimate, as also in a previous report. The Council have refused to allow the governors to see the calculations upon which the prime cost of the scholars has been estimated.

Mr. Fergusson said that the subject of the several papers was one of very great interest to Surgeons. The papers were evidence of a most important advance in modern Surgery, substituting, in the case of aneurism, pressure for a cutting operation, and reflecting great credit on the part of the younger Surgeons. In the first case the plan of compression was one with which the Profession was comparatively familiar; but the method in the other was of much more modern date, and was of peculiar interest. He referred to the bandaging of the limb in Mr. Hart's method, and suggested that its omission might account for failure in some cases. In Mr. Moore's paper he thought that a good deal had been said which did not bear on compression, although Mr. Moore's account was most interesting, accurate, and peculiarly detailed. He thought, however, that the account was too minute, and that if Surgeons paid so much attention to minute particulars they would be overburdened with anxiety. Mr. Fergusson also did not understand on what principle iodide of potassium had been given. He had thought that its therapeutical powers over those of an absorbent just the reverse of what was required in the sac of an aneurism. The Dublin Surgeons (he said), whilst using compression, advocated remedies tending to thicken the blood. Then he asked why Mr. Moore, when he supposed that part of the clot had been separated, did not try to break it up further, so as to get part of it into the distal end of the artery, and thus cure the aneurism? Mr. Fergusson then made remarks on what he thought were other minute observations in the account of the case, and especially alluded to the blistering, and the effect of tea on the patient's circulation. He concluded by saying that he thought that Mr. Hart's method had failed in Mr. Moore's case, as the aneurism was not popliteal, but in the upper part of the calf.

Mr. Barwell thought that Mr. Hart's plan would be successful in certain cases, but that some were unsuited for it, and that there was a risk of injury to the joint. He alluded to a case of subclavian aneurism then in the Charing-cross Hospital, under the care of Mr. Canton.

Mr. Moore said that he had few remarks to make, except to answer the courteous observations of Mr. Fergusson. The interest of the case, he thought, lay chiefly in the sudden changes in the circulation of the aneurism and the vessels of the limb. It did not occur to him to detach more clot; and he apprehended that Mr. Fergusson had recommended this plan in cases of aneurism at the root of the neck when there was not room to tie the artery. Iodide of potassium was given on the strong recommendation of Dr. Roberts, of Manchester. It seemed to be a fact that iodide of potassium did favour rapid deposit of fibrine in aneurism, but he (Mr. Moore) did not feel competent to give an explanation of it. He was sorry to have been considered too minute; and in reference to the tea, he had noted its effect, as it was well marked, and had been noticed by several gentlemen in attendance on the case to lessen the pulsation remarkably. He was sorry also that the flexion treatment had not succeeded, but this was due to the exceptional implication of a nerve trunk, so that the pressure could not be borne.

Mr. Ernest Hart said that the very favourable reception of the treatment of aneurism by flexion had necessarily afforded him the greatest satisfaction, and he thanked Mr. Fergusson, Mr. Moore, and Mr. Durham, not only for the attention which they had given to this suggestion, but for the very courteous and flattering terms which they had used that night. Mr. Durham's case resembled in its details very closely indeed the case which he (Mr. Hart) had communicated to the Society in the first instance; the size and position of the tumour, the duration and consequences of the treatment, were, indeed, precisely similar. This mode of treatment had now been successful in the hands of so many Surgeons, and in cases where other methods had failed, that he hoped it might now be considered established as one useful resource in the treatment of this affection, in which since the time of Hunter the British school of Surgeons had been deeply interested, and had made brilliant advances. From the first (Mr. Hart said) he had foreseen that it was not a universal method, and was contraindicated where the tumour was very large, where, by bandaging the leg, the pulsation was not well arrested, or where flexion caused great pain. In his own case he had bandaged the leg carefully from the foot upwards, and had recommended that practice in his paper in the *Transactions*. Mr. Durham, Mr. Johnson, and others, had found this very useful. Other Surgeons had, however, omitted it, and, he thought, to the detriment of the chances of success. There was much less pain where the leg and foot were well bandaged, so as to give uniform and firm support. He had no objection to the use of any apparatus for maintaining the leg in flexion, of which a variety could easily be made; but he thought the use of bandages perfectly effective, while they were always at hand; and it was one advantage of this system that neither assistants nor apparatus of any kind were needed. When cure was effected it was rather by greatly retarding than by arresting the flow of blood, and hence by the deposition of successive layers of fibrin in the sac—the very best mode of cure—rather than by coagulation of its contents *en masse*—the worst and most dangerous. Referring to the case of Mr. Moore, and the suggestion of Mr. Fergusson as to manipulation, Mr. Hart mentioned a recorded case by Mr. Teale, where manipulation so employed, after a period of compression, had proved successful. Useful, however, as the expedient might be in particular cases, it was dangerous; and what was wanted for permanent and safe cure was, not the sudden obliteration of an arterial canal, but the gradual filling up of the sac by layers of fibrin—in fact, the imitation of the natural and spontaneous process of cure. This was effected by flexion, and also by carefully regulated compression. He trusted, with Mr. Barwell, that the method of flexion would not be abused by continuing it so long as to induce inflammation or adhesion of the joint surfaces, especially as Surgeons had at their command, if flexion failed, the excellent, although more difficult and troublesome methods of compression by instrument or by the finger.

Mr. Ernest Hart read a

NOTE ON THE APPLICATION OF INDICES TO ANEURISMAL CLAMPS AND OTHER PRESSURE INSTRUMENTS.

The marked want of success which had attended the use of clamps and tourniquets in this country, as applied for the cure of aneurism, especially popliteal, by indirect pressure on the femoral, had (the author observed) become very evident to him in collecting published cases, and comparing the results in English Hospitals with those which had been obtained by the Irish Surgeons, who felt for this method of treatment all the interest which parentage could give. It was unnecessary to give figures or details for the purpose which he had in view; and he need only say that the analysis of the unsuccessful cases showed that the greater part had failed through the pain caused by the pressure, the ulceration or sloughing of the skin under the pad, or the extreme tediousness of the process, causing its abandonment as ineffectual, and recourse to the ligature of the main artery. Ligature, after compression had failed, gave less satisfactory results than primary ligature. In thirty-seven cases treated by English Surgeons, in which it had been employed after compression had failed, there were fourteen deaths. The sloughing, ulceration, and excessive pain, in a large number of the cases which he had mentioned, seemed to him to be the consequences of defective application of the pressure. To maintain continued and graduated pressure upon the femoral artery, even with any of the best compressors, without exerting too much on the one hand, and yet controlling the flow of blood on the other, was by no means easy, and required skilled and constant attention; and a certain amount of loving care was needed to prevent excess or defect. The most usual faults on the part of those entrusted by the Hospital Surgeon with watching the case were, employing an excess of pressure, or exerting pressure in a wrong direction; so that power was wasted in compressing muscles, and the artery was not fixed against the bone. The Surgeon placed the pad carefully in position, but it must presently be relaxed, and then the assistants commonly erred in greater or less degree in re-applying the pressure. The application of indices to the instruments was likely, the author thought, to obviate much of this difficulty, and to remove some prevalent causes of failure in instrumental compression. The Surgeon, on putting the pads in position, could in each case ascertain for himself with what amount of pressure the femoral circulation could be stopped, or slackened, according as he might desire to produce the one or the other effect. Having determined the minimum force by which this could be effected, he could then inform his assistants, and point out to them the limits within which they must keep the pressure. If, in replacing the instrument subsequently, they found that the circulation was not controlled with that degree of pressure, they would know that the pad was not well placed; and instead of screwing down the clamp, and increasing the pressure until the pulsation was stopped, they would be careful to improve the direction of the pressure. It would be very useful for the Surgeon himself to know what amount of pressure he was employing to stop the flow of blood; and it would be still more useful for the assistants to have under their eyes a constant monitor as to the correctness and care with which they were carrying out the Surgeon's directions. To give a long table of estimations of the degree of pressure in different subjects would not, the author thought, serve any useful purpose, as this would need to be ascertained for each particular case at the commencement of the treatment. He might, however, just select the three following from his notes of the results of experiment on this point, as giving average figures for three typical subjects:—A. D., adult male, 5 ft. 7 in. high, somewhat emaciated after illness; measuring (at the level of the perineum) round the thigh 15 in., above the knee 12 in. Pulsation arrested at apex of Scarpa's triangle by a pressure of 7 lbs.; at Hunter's canal by a pressure of 8 lbs. J. R., adult male, 5 ft. 6 in. high, robust and powerful; measuring (at the level of the perineum) round the thigh 22 in., above the knee 14½ in. Pulsation arrested at apex of Scarpa's triangle by a pressure of 11 lbs.; at Hunter's canal by a pressure of 14 lbs. A. N., adult male, 5 ft. 4 in. high, of slight and feminine build; measuring round the thigh at the level of the perineum 20 in., above the knee 12½ in. Pulsation of femoral arrested at fold of groin by a pressure of 4 lbs.; at apex of Scarpa's triangle, by 10 lbs.; at Hunter's canal, by 11 lbs. In the instrument which the author had made, and which he offered for inspection, the pressure is registered by a needle on a scale, and it is effected by a strong spring, which affords a pressure capable of nice graduation from four to twenty pounds. This instrument had already been tested in practice, and had worked well. Mr. Hart owed to the kindness of the Director-General of the Army Medical Department the report of a case in which it answered expectation in curing a popliteal aneurism. The analysis of cases showed that elastic pressure was best borne. The principle involved in the application of indices seemed to the author not unworthy the attention of the Society, for it was obviously one which might be applied with advantage to other instruments of pressure and extension in Surgery; and on the table would be seen an index of a similar kind applied to pulleys for reducing dislocations. It might be useful to apply them to apparatus for overcoming fibrous anchylosis, and restoring bent and deformed limbs.

MEDICAL NEWS.

Royal College of Physicians of London.—At a general meeting of the Fellows, held on Monday, December 14, the following gentlemen, having undergone the necessary examination, and satisfied the College of their proficiency in the Science and Practice of Medicine, Surgery, and Midwifery, were duly admitted to practise Physic as Licentiates of the College:—

John P. Atkinson, M.D., 2, Carlton-road West, New Peckham; Henry Ashlin Close, H.M. Ship *Royal Adelaide;* Charles Robert Fleury, Peninsular and Oriental Company's Service; Charles J. J. Harrer, M.D., of Vienna; John Warrington Haward, St. George's Hospital; William Gallimore Hayden, High Wycombe; William Hewitt, Upton, near Birkenhead; John Hide, 1, Ebenezer-terrace, Turner-street, Mile-end-road; John Charles Hunter, 30, Wilton-place, Belgravia; George Edwin Hyde, Worcester; Thomas E. Jones, Llanasa, Flintshire; Wynne Staton Ranson, M.D., Wincanton; John Wilton Sheridan, Stowmarket; John Henry Simpson, Maidstone; David Shorter Skinner, Headcorn, Kent.

Royal College of Surgeons of England.—The following Members of the College, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a Meeting of the Board on the 16th inst.:—

Alfred Cresswell, L.S.A., Peninsular and Oriental Steam Navigation Company, diploma of Membership dated May 18, 1858; Leonard Emanuel, M.D. St. Andrews, Inverness-road, May 16, 1859; George Annesley Derville Mahon, L.S.A., Aspley, Woburn, Beds, July 30, 1862; Joseph Henry Bonson, Hornsey-road, January 28, 1862; Wykeham Hawthorne Lydall, Westbourne-park-road, November 18, 1862; Frederic Amy, M.D. Edin., Jersey, January 30, 1862; James Lawton Andrew, Mosseley, near Manchester, May 6, 1863; Charles Forrester Bullmore, Falmouth, July 29, 1863; Frederick Bond Eaton, Lansdown-road, July 30, 1863; William John Stott, Haslingden, near Manchester, November 18, 1863; Charles Edward Martin Shaw, Crewkerne, Somerset, November 19, 1863; Edward Harris Ruddock, Woolwich, July 31, 1863; and William Gallimore Hayden, L.R.C.P. Lond., High Wycombe, November 20, 1863.

Apothecaries' Hall.—Names of gentlemen who passed their Examination in the Science and Practice of Medicine, and received certificates to Practise, on Thursday, December 10, 1863:—

George Fitzhenry, Brynmawr, Brecon, South Wales; Edward Lloyd Harries Fox, University College Hospital; David Hughes, Llangollen; J. J. McKenzie; William Foster Rooke, Scarborough, Yorkshire.

The following gentlemen also on the same day passed their First Examination:—

Henry Richard Smith, Guy's Hospital; William Turbeville Buckle, King's College; Francis Mears Beckett, St. Bartholomew's Hospital.

As an Assistant:—

Walter Clarke, Hereford-place, Commercial-road.

Pharmaceutical Society of Great Britain.—Names of Candidates who passed the Major Examination, December 16, as Pharmaceutical Chemists:—

William Gowland, Sunderland; William Heathorn, Maidstone; Richard C. Hopgood, Chipping Norton; Montague J. R. Hoskin, Southampton; Frederick C. M. Millar, Beaminster; Jacques L. Olivier, Mauritius.

APPOINTMENTS.

⁂ The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Curtis, W. W., has been elected Dispenser to the Torbay Infirmary and Dispensary.

Davey, T. S., has been appointed House-Surgeon to the London Surgical Home, Stanley-terrace, Notting-hill.

Hill, Matthew B., M.B. Lond., has been appointed Assistant-Surgeon to University College Hospital.

Moore, John D., M.D. Edin., has been appointed Curator of the Lancaster Museum.

Radcliffe, John N., M.R.C.S. Eng., has been elected non-Resident Medical Officer to the National Hospital for the Paralysed and Epileptic, Queen-square.

Rice, William, L.R.C.P. Edin., has been elected Assistant House-Surgeon to the Southern Dispensary, Liverpool.

Robertson, J., M.D., has been elected House-Surgeon to the Carlisle Dispensary.

DEATHS.

Braithwaite, Francis, F.R.C.S. Eng., at Bridge street, Hereford, on December 2.

Carr, William T., M.R.C.S. Eng., at the Dispensary, Newcastle-upon-Tyne, on November 29, aged 29.

Clark, Charles Coombe, M.R.C.S. Eng., at Twickenham, on December 11, aged 76.

Green, Joseph Henry, F.R.C.S. Eng., at Hadley, Middlesex, December 13, aged 72.

Harrison, George, F.R.C.S. Eng., at Chester, on December 2, formerly of Heswall, aged 86.

Moss, William C., M.R.C.P. Lond., at Kirkstall, Leeds, on December 8.

Moyle, John, M.R.C.S. Eng., at Chacewater, near Truro, on November 27, aged 52.

Parkes, William B., M.D., at 2, Inverness-terrace, Bayswater, on December 12, aged 52.

Robert, M. Melchior, one of the most distinguished writers on syphilis in France, has just died, at Marseilles, of disease of the heart. He was Surgeon-in-Chief at the Marseilles Hospital and Professor in the School of Medicine of that city.

Webster, Alexander, M.D. Edin., at 23, King-street, Dundee, on December 8, aged 64.

West, John, L.R.C.S. Edin., at Willoughby-place, Enniskillen, Ireland, on December 3, formerly Surgeon R.N.

Woodward, John R., M.R.C.S. Eng., at Worcester, on November 28, aged 62.

University Intelligence.—Oxford, December 12.—Mr. William Thiselton Dyer, from King's College, London, has been elected to the Physical Science Studentship at Christ Church. This gentleman is the son of Dr. Dyer, of Berkeley-street. The Examiners for the Radcliffe Travelling Fellowship have given notice that the next examination will commence on January 26, at 10 a.m., in the Museum. Candidates are requested to forward notice of their intention to present themselves to Dr. Acland before the end of the present month.

Cambridge, December 10.—A congregation was held to-day at twelve o'clock, when the following degrees were conferred:—*Master in Surgery*—Alfred G. P. Wilke, Trinity. *Bachelor of Medicine*—George William Steward, St. Peter's.

University of Dublin.—At the winter commencements, held in Trinity College, on Wednesday, the 16th inst., the following degrees in Medicine and Surgery were conferred:—*Baccalaurei in Medicina*—Josephus F. Blake and Georgius Atkinson. *Magister in Chirurgia* — Georgius Atkinson. *Doctor in Medicina*—Thomas Edvardus Beatty (*honoris causa*).

Académie des Sciences.—Mr. Sylvester, of Woolwich, was elected a corresponding member in the Section of Geometry, by forty-eight suffrages of the fifty voters who were present.

At a meeting of the Medico-Chirurgical Society of Edinburgh, on Wednesday, December 2, 1863, the following office-bearers were elected:—*President*—Douglas Maclagan, M.D. *Vice-Presidents*—Andrew Wood, M.D.; Peter D. Handyside, M.D.; J. Warburton Begbie, M.D. *Councillors*—William Finlay, M.D.; Charles Dycer, M.D.; William Menzies, M.D.; John Gillespie, M.D.; John Smith, jun., M.D.; Thomas Balfour, M.D.; Robert Bruce, M.D.; R. E. Scoresby-Jackson, M.D. *Treasurer*—George Balfour, M.D. *Secretaries*—James D. Gillespie, M.D., 45, Castle-street; Patrick H. Watson, M.D., 10, Charlotte-square.

The death of Mr. Green has created vacancies in the following offices:—The presidency of the General Medical Council, a membership of the Council of the College of Surgeons, a membership of the Court of Examiners of the College of Surgeons, and of the Board of Examiners in Dental Surgery. There are various speculations as to who will be Mr. Green's successor in the Court of Examiners at the College. Messrs. Gulliver, Partridge, and Hilton are, we believe, the three members of the Council who come next in rotation for election.

Poisoning by Arsenic.—At the Chester Assizes a woman named Alice Hewitt was found guilty and sentenced for the wilful murder of her mother by arsenic. The body had been buried on March 31, and was exhumed on June 12. It was found to be undecomposed, and it is said that 130 grains of arsenic were discovered in it.

Medical Charities.—Miss Gale, of Cadogan-place, London, and of Andover, has bequeathed the following munificent sums to the under-mentioned institutions:—£100 to the London Fever Hospital; £500 to the Winchester County Hospital; £500 to the Royal Free Hospital, Gray's-inn-road; £500 to the Deaf and Dumb Institution; £500 to the Indigent Blind; and £1000 to the Middlesex Hospital, making a total of £3100.

The Ill-Treatment of Idiots and Lunatics.—Since the publication of the Flushing case reports of several similar ones in different parts of the country have appeared in the columns of the daily papers. The Lunacy Commissioners have commenced a prosecution against Samuel Porter for ill-treatment and neglect of his brother Robert (the Flushing idiot). Mr. Byrne, the Medical man who first discovered and called attention to Porter's case, has addressed the following letter to the *Times*:—"Sir,—The public will no doubt be horrified to hear that I am again in communication with the Lunacy Commissioners about a case which, if I had not seen Porter's, I would have thought the very worst description. My object, however, in writing, is to suggest a simple remedy for the prevention of such inhumanity—viz., to make it a misdemeanour to have a lunatic in any family, high or low, rich or poor, without communicating the fact to the Board, and the appointment of Medical men throughout the country, whose duty it should be to visit at their own pleasure the house containing such lunatic, satisfy themselves he is well cared for, and report to the commissioners.—I remain, Sir, yours, &c.,—T. E. D. Byrne, L.R.C.P., &c.—Berkely-house, Falmouth, December 14."

The Malarious Tongue.—Surgeon Bidwell draws attention in this paper to a peculiar condition of the tongue, surely indicative of the operation of malarious poison. "Its under surface appears to have trespassed upon the upper, the papillæ of the latter being supplanted by the transverse rugæ of the former. The sides are thickened and rounded, the normal, well-defined edge being obliterated, and the line of demarcation moved to nearer the mesial line. This appearance of the sides may be associated with any and every possible appearance of the remaining papillary surface, just as the malarious disease itself may be attended by any and every variety of morbid condition of the system. Through all this variety it is perfectly distinct, and when once learnt by actual inspection is unmistakable. Wherever I find this malarious tongue, whatever other symptoms and conditions may be present, I give quinine freely and confidently. So much confidence do I place in its indications, that when it is present in complicated or obscure cases, I make all other treatment wait upon quinine as the first and indispensable remedy. On the other hand, when soldiers come to me complaining of 'chills,' whose tongues do not present this appearance, they are unhesitatingly returned to duty. The remark that this appearance is an unfailing indication of the quinine treatment, is not to be understood as implying that such treatment is to be continued until the symptom disappears. That is not necessary or advisable. Relief and amendment do not wait for its disappearance, but even come some days in advance of it."—*Boston Journal*, vol. 68, No. 2.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

SO_2.—1. It is contrary. 2. There is no such list.

The late Mr. Mark Rowland Day.—In our obituary notice of this gentleman, a slight inaccuracy occurs. He entered the Profession as a pupil of the late Samuel Sharman Brame, Esq., M.D., of Lowestoft, in Suffolk, and was an assistant of the late Mr. Close.

Dr. Rittor's work is intended for review. The acknowledgment of the receipt of a book by no means precludes further notice.

The Treatment of Secondary Affections of the Tongue.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Perhaps some one of your correspondents will inform me the best general and local treatment of secondary exudations of the tongue, and if potass. iodid. alone will cure them. I am, &c.

A Young Practitioner.

Experiments on Alcohol.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—It seems to me that the attack of M. Baudot upon what Dr. Kidd truly calls "the masterly researches of Lallemand, Perrin, and Duroy," are exceedingly shallow and inconclusive. It is no wonder that their qualitative test should not gather up more than 28 per cent. of the alcohol absorbed into the entire fluid and solid matter of our body; and I should desiderate an apparatus that possibly could re-collect from blood, tissues, secretions, and excretions, all that had entered it? But why should the system treat the 72 per cent. differently from the 28? The conclusion of M. Baudot is a mere assumption from a negation—and one which ignores the most important portion of the experiments—viz., the absence in the blood and secretions of the derivatives of alcohol, while alcohol itself was so sensibly present? Where, gentlemen, are your aldehyde, and your acetic acid, or your new substances resulting from the alleged oxydation of alcohol? You are bound to find them; and until they are found, M. Baudot's conclusion is a *non sequitur*. Chloroform, by the same logic, would be respiratory food.

Kent House, Leeds, December 12. I am, &c. F. R. Lees.

The Case of Symm *v.* Fraser and Andrews.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In reply to the charges you have thought fit to bring against me in your article on the case of "Symm *v.* Fraser and another," I have to state that when subpœnaed, as I was in this case, my lawyer informs me I am compelled to appear in the witness-box under the penalty of being attacked for contempt of Court, of forfeiting £100 (the fine named in the subpœna), and of being liable to an action should the parties at whose instance I am subpœnaed lose their trial.

I may add that this opinion tallies with the statement made to me by the attorney serving the subpœna, when to him I expressed my strong dislike to have anything to do with the case, and with that of other highly respectable lawyers to whom I have shown the opinion. You state to the contrary.

But utterly erroneous as I believe your law to be, I shall be prepared in another similar case to treat the subpœna with the contempt you advise, if you will prove your confidence in its correctness by guaranteeing me against any pecuniary or other injury I may thereby sustain.

I did not offer theoretical evidence for the purpose of damaging the cause of my Professional brethren; I replied to questions put to me by the examining counsel and by the Judge, such questions, for the most part, having reference to matters of fact, and where my opinion was asked I based it on, or quoted in support of it cases which I had seen. I did not suggest these questions, and my evidence was considered by the defendants, as they assured me in court, straightforward, fitting, and beneficial to their cause. The counsel for the plaintiff was not prepared for the most important part of my evidence, which he considered injurious to his client, whilst the counsel for the defendants in his address to the jury called particular attention to my evidence, stating that he had never heard better given by a Medical witness, and remarked on the extreme caution with which I gave it.

I not only can, but I do emphatically deny, that my appearance in court was intended by me (for that you imply) to injure the defendants' case by throwing doubt on their diagnosis, for I knew nothing of these gentlemen, and had heard and wished to hear very little of the case before I came into court.

It was no business of mine to sit in judgment on them, yet I did strongly urge on the plaintiff when she called on me in the first place not to bring, and afterwards not to persist in the action, though I then feared, from what little I heard, that they had rendered themselves liable to it.

As my evidence was given in the presence of the defendants, both men of character and intelligence, and of several of their professional friends, also of good standing, it seems strange that they did not suggest to their counsel that my appearance was sanctioned neither by Medical science nor by the unwritten but recognised laws of Professional conduct; if I had really thus sinned, stranger still that the defendants and their counsel should have expressed so different an opinion. But, Sir, with all respect due to you as a public journalist, I would suggest that no law of our Profession can claim obedience which is not based on justice and truth, and till you point out the particulars of my evidence which infringe these principles I shall claim to have acted in accordance with that noble saying—

Amicus Socrates, amicus Plato,
Sed magis amica veritas.

Bath, Dec. 8. I am, &c. JOHN BARRETT, F.R.C.S. (Exam.)

⁂ A complete answer to Mr. Barrett's letter is contained in the plaintiff's (Mrs. Symm) evidence, which we here quote:—

"I told Dr. Barnes I should take proceedings against the defendants, and I afterwards received a letter from him stating they had done everything Medical men could have done under the circumstances, and had taken upon themselves a painful responsibility. *Dr. Barnes has refused to come forward as a witness in my behalf.*"

Had Mr. Barrett and Dr. Tunstall acted in the same way as Dr. Barnes, we leave it to the Profession to judge whether this action would ever have been brought into court. It is clear from Mr. Barrett's letter that the subject of proceedings against Drs. Fraser and Andrews was discussed during his professional intercourse with Mrs. Symm. Had he at once decidedly said—"I refuse to have anything to do with an action brought against Medical men for a course of conduct about which—as I did not witness the circumstances of your illness—I have no right to offer an opinion," the plaintiff must either have abandoned the proceeding or have sought assistance elsewhere. Mr. Barrett asserts that his evidence was not intended to injure the defendants' cause by throwing doubts on their diagnosis. We must again leave it to our readers whether the following passages taken from the shorthand writer's notes would have the effect of corroborating or invalidating the defendants' diagnosis (of delirium tremens) in the minds of the jury:—

"Mr. Montague Chambers: As far as you can form a judgment, as a professional man of experience and eminence, were there any symptoms of her having suffered from delirium tremens?

"Mr. Barrett: Certainly her state did not imply that which is usually called delirium tremens.

* * * * * * * *

"She (Mrs. Symm) was at that time in some degree suffering from gout not properly developed. A gouty diathesis would be different from suffering from gout. She was, I believe, suffering from gout, then affecting the knee, and affecting, I believe, the chest. I attribute the symptoms of the chest to the gouty state in which I believe she was then.

* * * * * * * *

"She had certainly an affection of the knee joint, which I think would be attributed by most Surgeons to a gouty, or it might be called a semi-gouty or rheumatic affection. The symptoms of the chest I believe were also of that character; and what she considered a sore throat I believe to have been acidity of the stomach, the irritation which so continually arises, and that the mental state may have arisen—I am bound to say that was my impression at the time—from the same gouty state."

It will be remembered that hallucinations were not a marked symptom in Mrs. Symm's case. In answer to a question by Mr. Chambers—whether in a case of violent delirium tremens requiring two keepers to keep the patient in order, there would not be hallucinations as well as violence—

"Mr. Barrett: I think there would. I have rarely seen delirium tremens without.

"Mr. Chambers: Without these hallucinations and delusions?

"Mr. Barrett: Never."

We do not deny that a part of Mr. Barrett's evidence told in favour of the defendants; but as we give Mr. Barrett credit for honesty and some knowledge of his Profession, it could not be otherwise, considering the clear nature of their case. But accepting the denial of Mr. Barrett, that "his appearance in court was not intended by him to injure the defendants' case by throwing doubts on their diagnosis," we reply, that Mr. Barrett's appearance was intended by the prosecution to injure the defendants' case, and, as Mr. Barrett could not be ignorant of this, he at least lent himself to their purpose. With regard to the other points in Mr. Barrett's letter we beg to refer him to an article headed "*Lessons from a late Lawsuit*," *Med. Times and Gaz.*, 1862, Vol. i., p. 431. Mr. Barrett will find in that article full information as to the penalty which might fall on any one who neglects a subpœna, and will find there also an answer, by anticipation, to such other parts of his letter as demand one.

THE SYPHON PRINCIPLE IN RETENTION OF URINE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It has often occurred to me that the syphon principle may be applied to cases of retention of urine from stricture or from enlarged prostate. If a non-compressible, and therefore a silver catheter, were in difficult cases of this sort taken down to the outer end of the obstruction, and if to the outer end of the catheter an air-syringe duly fixed were set to work, as soon as the air is removed the bladder would be in the condition of a syphon, and would very soon empty itself. In any case this would be preferable, if it works well in practice, to the annoyance of the catheter. If either of us were in old age the victim of retention from enlarged prostate, we should like to do without a catheter. Any one of our surgical instrument makers could arrange such an instrument, leaving a globular receptacle in some depending part of it large enough to hold a pint of urine. It is nothing more than the principle of the breast pump applied to the urethra. I happen to know from the statement of a friend, who spent some time among the Indians in Arkansas, that a practice similar in principle is adopted by their "medicine-men."

I name this subject in the hope that some of your magnates who can do as they like with many of their patients, may put to the test of experience the relief of the bladder in cases of retention by the use of a small air-pump. In our country towns we are almost pledged against innovation. We are to practise on the established usages of the Profession which we represent. If the plan succeeds, as we have reason to think it must, we shall find ourselves relieved from many a case of perplexity, and shall have it in our power to dismiss a painful remedy.

December 7. I am, &c. X.

COMMUNICATIONS have been received from—

Dr. J. HUGHLINGS JACKSON; the Rev. E. DAY; SOs; Mr. G. E. RYLE; ETHNOLOGICAL SOCIETY OF LONDON; APOTHECARIES' HALL; Dr. G. RITTER; Mr. J. H. COHEN; A YOUNG PRACTITIONER; HARVEIAN SOCIETY; Dr. HENRY BARBER; ROYAL COLLEGE OF PHYSICIANS; ROYAL INSTITUTION; Mr. N. HECKFORD; Dr. B. WALTER FOSTER; Dr. W. AITKEN; Mr. JOHN WINDSOR; Mr. W. TOWNSEND; Dr. F. R. LEES; Dr. H. W. RUMSEY; Dr. FORBES WINSLOW; Mr. W. PARKER; PHARMACEUTICAL SOCIETY; Mr. WALTER RICKARDS; Mr. W. SANDS COX; Dr. R. DUNDAS THOMSON; ROYAL MEDICAL AND CHIRURGICAL SOCIETY; Dr. W. T. GAIRDNER.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 12, 1863.

BIRTHS.

Births of Boys, 1112; Girls, 988; Total, 2100.
Average of 10 corresponding weeks, 1853-62, 1752·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	702	655	1357
Average of the ten years 1853-62	668·8	634·8	1303·6
Average corrected to increased population..	..	..	1434
Deaths of people above 90	..	..	8

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1861.	Small pox.	Measles.	Scarlatina.	Diphtheria	Whooping-Cough.	Typhus.	Diarrhœa.
West	463,388	..	2	15	2	4	8	2
North ..	618,210	7	9	31	2	9	11	1
Central ..	378,058	1	6	16	3	6	14	1
East	571,158	..	3	25	4	9	18	..
South ..	773,175	3	7	27	4	7	25	8
Total.. ..	2,803,989	11	27	114	15	35	76	12

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·034 in.
Mean temperature	46·7°
Highest point of thermometer	53·5
Lowest point of thermometer	34·8
Mean dew-point temperature	42·3
General direction of wind	S.W.
Whole amount of rain in the week	0·12 in.

APPOINTMENTS FOR THE WEEK.

December 19. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; St. Thomas's, 1 p.m.; King's 2 p.m.; Charing-cross, 1 p.m.; Lock Hospital, Dean-street, Soho, 1 p.m. Royal Free Hospital, 1½ p.m.

21. *Monday.*

Operations at the Metropolitan Free Hospital, 2 p.m.; St. Mark's Hospital, 1½ p.m.; Samaritan Hospital, 2½ p.m.

22. *Tuesday.*

Operations at Guy's, 1 p.m.; Westminster, 2 p.m.

ETHNOLOGICAL SOCIETY, 8 p.m. Francis Galton, Esq., "On the First Steps towards the Domestication of Animals." Rev. G. Rome Hall, "On the British god Mogon, and the Religion of the Northumbrian Celts"

23. *Wednesday.*

Operations at University College Hospital, 2 p.m.; St. Mary's, 1 p.m.; Middlesex, 1 p.m.; London, 2 p.m

24. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Great Northern, 2 p.m.; Surgical Home, 2 p.m.; Royal Orthopædic Hospital, 2 p.m.; Royal Free Hospital, 1½ p.m.

25. *Friday.*

Operations, Westminster Ophthalmic, 1½ p.m.

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ADDRESS TO THE MEDICAL PROFESSION.

DR. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

J. T. DAVENPORT begs to inform the Medical Profession and the Trade that any statement OTHER THAN THAT Dr. J. COLLIS BROWNE, M.R.C.S.L., late Army Medical Staff, was the Sole Inventor and Discoverer of Chlorodyne, is an unfounded misstatement of fact.

J. T. DAVENPORT directs attention to a certain unblushing Advertisement which announces that other than Dr. J. C. B. was the Inventor and Discoverer of Chlorodyne, and that an affidavit on oath was made to that effect.

J. T. D. gives the most emphatic denial to both these statements, for it is a well-known and established fact to the Medical world that the word "Chlorodyne" was coined by Dr. BROWNE specifically to identify his newly-discovered Preparation; and that it for the first time appeared, through advertisements in the "Lancet," "Medical Times," and other public journals, in November, 1856; and that it was not until the end of 1859 that an advertisement appeared pirating this name, and attaching it to a compound made in imitation, copying the label, shape, and colour of bottle of that in which Dr. BROWNE'S Chlorodyne was sold.

J. T. DAVENPORT therefore appeals to the good sense and honour of the Profession to suppress and discountenance, to the utmost of their ability, these misrepresentations.

CAUTION.—It is necessary always to write "Chlorodyne—Dr. Browne's," as frequent complaints are made of imitations being substituted.

Sole Manufacturer—J. T. DAVENPORT, 33, Great Russell-street, Bloomsbury-square.

REDUCTION OF PRICE TO THE MEDICAL PROFESSION.

In bottles, 1 oz., 3s.; 2 oz., 5s.; 4 oz., 8s.; 10 oz., 15s. To Hospitals and Charities, in quantities, a large discount allowed. Each *genuine* bottle bears a red stamp, with the words "Dr. J. Collis Browne's Chlorodyne" in white letters.

To be obtained from all Wholesale Druggists.

ORIGINAL LECTURES.

PROFESSOR HUXLEY'S LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

THE LECTURES ON THE VERTEBRATE SKULL.

VIII.—*The Theory of the Vertebrate Skull.*

In the preceding Lectures I have, as far as possible, confined myself to a statement of matters of fact, and to the conclusions which immediately flow from the application of a very simple method of interpretation to the facts. That method of interpretation is based upon the principle that, in any two skulls, those parts which are identical in their principal relations in the adult state, and in the mode in which they reach this state (or in their development) are corresponding or homologous parts, and need to be denominated by the same terms.

By the application of this method it has been possible to demonstrate the existence of a fundamental unity of organisation in all vertebrate skulls; and, furthermore, to prove that all bony skulls, however much they may differ in appearance, are organised upon a common plan, no important bone existing in the highest vertebrate skull which is not recognisable in the lowest completely ossified cranium.

The enunciation of these results alone is a theory of the skull, but it is by no means what is commonly understood as *the* theory of the skull.

For it will be observed that the statement just put forth confines itself to a simple generalisation of the observed facts of cranial structure, and would be perfectly complete were the skull a self-subsistent structure, devoid of any connexion with a trunk. On the other hand, that doctrine to which the title of "The Theory of the Skull" is ordinarily applied embraces not only such a generalised statement of the facts of cranial structure, but adds a hypothesis respecting the relations of the skull to the spinal column. It assumes that the bony cranium (the cartilaginous and membranous states of the cranium it usually ignores) is composed of elements homologous with those which enter into the structure of the spinal column; that, in fact, it consists of modified vertebræ. And it is commonly conceived that it is the doctrine of the unity of structure of the skull and of the vertebral column, rather than the demonstration of the unity of organisation of skulls, which is one of the chief glories of morphology.

The assumption that every skull repeats the organisation of the trunk and consists of a certain number of modified vertebræ, evidently implies a belief in the unity of organisation of skulls; but it is to be carefully noted that the converse proposition does not hold good; for it is quite possible to hold that all skulls are modifications of one fundamental plan, while wholly disbelieving that plan to be similar to the plan of a vertebral column.

Looking broadly at the history of the theory of the skull, (using that phrase in its widest sense), I note three great lines of inquiry which have brought that theory into its present condition,—the first originated by Oken and Goethe; the second, not originated, perhaps, but chiefly fostered and developed by Geoffroy St. Hilaire and Cuvier; the third originated, and almost exclusively worked out, by Reichert, Rathke, and their followers among the embryologists of Germany and England.

I. I have united the names of Goethe and of Oken as the originators of the hypothesis of the vertebral structure of the skull, as a matter of equity, and to aid in redeeming a great name from undeserved obloquy; though, in strict technical justice, the claim of the one to priority lapsed through lack of publication.

Goethe combined with a fervid creative genius, which has placed him on a level with the greatest poets of all ages, so much of observational acuteness and of intellectual precision as might have sufficed for the equipment of a well-reputed man of science. Passionately devoted to the natural sciences, and especially to botany and to osteology, from his youth up, and induced by the habit of his mind to search for the general truths which give life to the dry bones of detail, Goethe had been led to drink deeply of the spirit of morphology during his study of the metamorphosis of plants, and his successful search after the premaxillary bones of man, imagined, before his time, to be wanting. With a mind thus prepared it was no wonder that, as Goethe writes, the notion of the vertebral composition of the skull had early dawned upon him:—

"The three hindermost parts I knew before, but it was only in 1791, on picking up an old and broken sheep's skull amidst the sandy dunes of the Jewish cemetery in Venice, that I perceived the facial bones also to be made up of great vertebræ; and perceiving, as I clearly did, the gradual passage from the first pterygoid bone to the ethmoid bone and to the spongy bones, the whole became plain."

Not improbably deterred, however, by the many difficulties which must have occurred to him, in attempting to carry out these views with due scientific sobriety, Goethe kept them to himself, or shared them only with his immediate friends, for thirty years; the passage cited, in which they are first mentioned, bearing the date of 1820.

But, in 1807, Lorenz Oken independently originated and, what is more to the point, published, those views of the vertebral composition of the skull which have since attained such world-wide celebrity; so that the great poet's silent partnership in the affair would be hardly worth mentioning were it not that his reticence has been made the ground of severe attacks upon his honour and veracity. It has been suggested that Goethe, full of years and of honours, thought it worth while to attempt to steal from the young Professor of Jena the fame that had accrued to him. And upon the infamy of such petty larceny the poet's latest accuser has heaped the insinuation that the author of "Faust" and of "Meister" was so stupid a plagiarist as to copy, not only Oken's views, but his account of the manner in which he came by them.

"Vaguely and strangely, however, as Oken had blended the idea with his *à priori* conception of the nature of the head, the chance of appropriating it seems to have overcome the moral sense—the least-developed element in the spiritual nature—of Goethe, unless the poet deceived himself."(a)

"The circumstances under which the poet, in 1820, narrates having become inspired with the original idea are suspiciously analogous to those described by Oken in 1807, as producing the same effect on his mind."(b)

It would be difficult to couch an offensive accusation in stronger phraseology than this; but, by a singular chance, the scientific morality of its object has recently been fully vindicated. Goethe, when in Italy, kept up a correspondence with the family of his friend Herder. His letters have been published, and in one addressed to Madame Herder, and dated May 4, 1790, this passage occurs:—

"By the oddest, happy chance, my servant picked up a bit of an animal's skull in the Jew's Cemetery at Venice, and, by way of a joke, held it out to me as if he were offering me a Jew's skull. I have made a great step in the explanation of the formation of animals."

Can it be doubted that this "great step" is exactly that vertebral theory of which Goethe says, writing in 1820, he had so clear a view "thirty years ago?" It is to be hoped that this evidence, which Prof. Virchow has so strikingly put forward, will henceforward silence even the most virulent of Goethe's detractors, although a careful perusal of the arguments used by Mr. Lewes, in his "Life of Goethe," might have already sufficed those who were open to conviction.

The idea, which dropped still-born from Goethe's mind, was, as I have said, conceived afresh by Oken, and came vigorously into the world in that remarkable discourse (occupying in print about fourteen quarto pages) with which he inaugurated his professorial labours at Jena.

It is hard to form a just judgment of this singular man; and, I must confess, I never read his works without thinking of the epithet of "inspired idiot," applied to our own Goldsmith: so strange is the mixture of insight and knowledge with what, to my apprehension, is mere "sound and fury, signifying nothing." But the "Programm" contains far more of the former and less of the latter ingredient than is usually noticeable in Oken's lucubrations, and it appears to me to be, at the present moment, by far the best specimen extant of the style of speculation about the skull, characteristic of the school which Oken originated. Indeed, if for the term "cranial vertebræ" "cranial segments" be substituted, I do not know that the plan of composition of the

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(a) "Encyclopædia Britannica," eighth edition, vol. xvi., p. 501; article, "Oken."

(b) *Ibid.*, p 501.

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